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## 1,25-DihydroxyvitaminD

Panel Code: LAB3156

CPT Codes(s): 82652

Test Performed at: FAIRVIEW LABORATORY

Analytic Time: 168 hours (7 days)

Days Test Performed: twice/week

### Specimen:

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection (allow tube to clot at Room Temperature for 15-20 minutes).

UNACCEPTABLE: Grossly hemolyzed, icteric or lipemic samples as well as samples containing particulate matter.

NOTE: This test is primarily indicated during patient evaluation for hypercalcemia and renal failure. A normal result does not rule out Vitamin D deficiency. The recommended test for diagnosing Vitamin D deficiency is LAB535 Vitamin D, Total (25-Hydroxy). Alternate specimen: Plasma from Green Top (Lithium Heparin) or Lavender Top (EDTA). Centrifuge and aliquot within 2 hours of collection. For pediatric patient (<16 years of age) order LAB3156.

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## 17-Hydroxyprogesterone

Panel Code: OHP

CPT Codes(s): 83498

Test Performed at: FAIRVIEW LABORATORY

Analytic Time: 168 hours (7 days)

Days Test Performed: once/week

### Specimen:

COLLECT: Plain Red Top

SUBMIT: 0.5 mL serum FROZEN. Minimum volume 0.25 mL

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: No isotopes administered 24 hours prior to specimen collection. Infants must be at least 24 hours old.

**5-Hydroxyindoleacetic Acid (HIAA), Urine****Panel Code: HIA****CPT Codes(s):** 83497**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:****COLLECT:** 24 Hour Urine (No Preservative)**SUBMIT:** 4 mL aliquot (from well mixed 24 hour urine collection) REFRIGERATED during and after collection. Minimum volume 1 mL.**UNACCEPTABLE:** Room Temperature specimen.**NOTE:** "Total volume (mL) and collection time interval (hours or random) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

Patients should abstain, if possible, from medications, over-the-counter drugs, and herbal remedies for at least 72 hours prior to the test. Foods rich in serotonin (avocados, bananas, eggplant, pineapple, plums, tomatoes, walnuts ) and medications that may affect metabolism of serotonin must be avoided at least 72 hours before and during collection of urine for HIAA. A more comprehensive list of dietary restrictions can be found at <http://ltd.aruplab.com/Tests/Pub/0080420>.

Alternate specimen: random urine collection.

The HIAA-to-creatinine ratio will be reported whenever the urine collection is random or other than 24 hours, or the urine volume is less than 400 mL/24 hou\*

**6-MAM Confirmation, Urine****Panel Code: MAM****CPT Codes(s):** 80356**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Mon Wed**Specimen:****COLLECT:** Random Urine in a Screw-Top Container**SUBMIT:** 10 mL aliquot of a random urine REFRIGERATED (no preservative).**ABO Typing (HML)****Panel Code: ABO****CPT Codes(s):** 86900**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:****COLLECT:** EDTA-Lavender Top**SUBMIT:** 4 mL whole blood REFRIGERATED; minimum volume 0.5 mL.**UNACCEPTABLE:** Incompletely or incorrectly labeled specimens. Specimens collected in SST® tube or more than 7 days old.

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**ABO/RH Type, Cord Blood****Panel Code: CTY****CPT Codes(s):** 86900 86901**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** All**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 1 mL Cord Blood REFRIGERATED.

NOTE: If indicated, a Weak D(Du) test will be performed at no charge.

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**ABO/Rh Typing (Cell), Neonate****Panel Code: LAB2253**

\*\*\* HML Client Orders Only \*\*\*

**CPT Codes(s):** 86900, 86901**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** ALL**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 0.5 mL whole blood REFRIGERATED in Lavender Top Microtainer Tube.

UNACCEPTABLE: Incompletely or incorrectly labeled specimens. Specimens collected in SST® tube or more than 7 days old.

NOTE: If indicated, a Weak D(Du) test will be performed at no charge. STAT will be done at any time.

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**ABO/RH Typing (HML)****Panel Code: HTY****CPT Codes(s):** 86900, 86901**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED; minimum volume 0.5 mL. Submit entire tube.

UNACCEPTABLE: Incompletely or incorrectly labeled specimens. Specimens collected in SST® tube or more than 7 days old.

NOTE: If indicated, a Weak D(Du) test will be performed at no charge.



**Acetaminophen(Tylenol®)****Panel Code: ACT****CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum separated from cells and REFRIGERATED up to 7 days.

UNACCEPTABLE: Markedly hemolyzed specimen.

**Acetylcholine Receptor Binding Antibody****Panel Code: ABI****CPT Codes(s):** 83519**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimen.

**Activated Protein (APC) Resistance V****Panel Code: APC****CPT Codes(s):** 85307**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Blue Top

SUBMIT: 1 mL platelet-free plasma FROZEN immediately or no more than 4 hours after collection in a separate tube.

UNACCEPTABLE: Specimen not received frozen. Patient receiving heparin. Markedly hemolyzed or lipemic specimen. NOTE: See the Specimen Collection section of this manual for preparation of platelet-free plasma.

**Adenovirus Antibody****Panel Code: AND****CPT Codes(s):** 86603**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 1mL serum ROOM TEMPERATURE.



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**Adrenal Corticotropin****Panel Code: ACH****CPT Codes(s):** 82024**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** 2 times per week**Specimen:**

COLLECT: Prechilled Lavender Top

SUBMIT: 0.5 mL plasma from a prechilled lavender top, centrifuged (in a refrigerated centrifuge), aliquoted, and FROZEN immediately in a separate tube. Minimum volume 0.15 mL.

UNACCEPTABLE: Sample not frozen when received. Sample not separated from cells and frozen within 2 hours of collection.

NOTE: Keep specimen on ice. This is an ACTH assay, NOT part of an ACTH stimulation test.

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**Adulterants, Urine****Panel Code: ADL****CPT Codes(s):** 81005**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot random urine collection (no preservative) REFRIGERATED.

NOTE: Assess the possible adulteration of a urine specimen submitted for drug of abuse testing.

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**AFB Stain****Panel Code: AFB****CPT Codes(s):** 87206**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Specimen in sterile screw-top container REFRIGERATED.

NOTE: Specimen source is REQUIRED. AFB stain is INCLUDED in respiratory TB cultures only. All other TB cultures need an AFB Stain ordered separately. This stain cannot be ordered alone. Laboratory will order and charge culture separately.



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**AFP Tumor Marker****Panel Code: AFP****CPT Codes(s):** 82105**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

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**AFP-Amniotic Fluid****Panel Code: AFA****CPT Codes(s):** 82106**Test Performed at:** Hennepin County Medical Center**Analytic Time:** 216 hours (9 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Amniotic Fluid in a Screw-Top Container

SUBMIT: 1 mL uncentrifuged amniotic fluid ROOM TEMPERATURE. Preferred gestational age, 13-24 weeks; 16-18 weeks preferred.

NOTE: Specimen must arrive at HML by 2 P.M., Mon-Fri. Complete and submit a Maternal AFP form found in the front section of the manual. If AFP is positive, then (82013) Acetylcholinesterase will be performed and charged.

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**Albumin****Panel Code: ALB****CPT Codes(s):** 82040**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

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**Albumin, Body Fluid****Panel Code: ALF****CPT Codes(s):** 82042**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED (up to 7 days).

NOTE: Specimen source is REQUIRED.



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**Alcohol, Ethyl, Blood****Panel Code: ALC****CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Grey Top

SUBMIT: 4 mL whole bold REFRIGERATED. Specimen must arrive unopened within 24 hours of collection.

NOTE: Before drawing specimen, clean site with a non-alcohol germicide. (Do not use alcohol wipes for venipuncture.) Tube should be completely filled to prevent loss of volatile compound into headspace. DO NOT REMOVE CORK BEFORE TESTING. Analysis at HealthEast Medical Laboratory will be performed on plasma (separated at the time of testing).

\* Alternative specimen - Red Top or Lavender Top if received at HealthEast Medical Laboratory within 4 hours of draw.

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**Alcohol, Ethyl, Urine Screen****Panel Code: ALU****CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container, cap immediately after collection.

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.

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**Aldolase, Serum****Panel Code: ALS****CPT Codes(s):** 82085**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL.

UNACCEPTABLE: Hemolyzed specimens. Specimen types other than serum.

NOTE: Allow specimen to clot completely at room temperature. Specimen stable Refrigerated 5 days, Frozen 6 months.



**Aldosterone, Serum****Panel Code: ADB**

**CPT Codes(s):** 82088  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top (mid morning)  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** EDTA plasma.  
**NOTE:** Collect midmorning after patient has been sitting, standing or walking for at least 2 hours and seated for 5-15 minutes. Normal serum levels of aldosterone are dependent on the sodium intake and whether the patient is upright or supine. High sodium intake will tend to suppress serum aldosterone, whereas low sodium intake will elevate serum aldosterone. The reference intervals for serum aldosterone are based on normal sodium intake. Upon the advice of their physician, patients should be encouraged to withdraw agents that markedly affect ARR for at least 4 weeks prior to testing including Spironolactone, eplerenone, amiloride, triamterene, potassium-wasting diuretics, & products derived from licorice root (eg, licorice, chewing tobacco).

**Aldosterone, Urine****Panel Code: ADU**

**CPT Codes(s):** 82088  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Tue Thu Sat

**Specimen:**

**COLLECT:** 24 Hour Urine (No Preservative)  
**SUBMIT:** 4 mL aliquot (from well mixed 24 hour urine collection) FROZEN immediately (must be refrigerated during collection). Minimum volume 0.5 mL.  
**UNACCEPTABLE:** Specimen not frozen or acidified within 4 hours of collection.  
**NOTE:** Total volume (mL) and collection time interval (hours) REQUIRED. See the Specimen Collection section of this manual for collection instructions. Alternate specimen: Frozen urine preserved with 1 g boric acid per 100 mL urine or refrigerated preserved urine if the pH of the specimen is adjusted to 2-4 with 6M HCl or 50 percent acetic acid within 4 hours of collection.

**Alkaline Phosphatase, Total****Panel Code: ALK**

**CPT Codes(s):** 84075  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED (up to 7 days).  
**UNACCEPTABLE:** Markedly hemolyzed specimen.





**Alkaline Phosphatase, Total & Isoenzymes, Serum or Plasma**

Panel Code: AKI

Alkaline Phosphatase, Isoenzymes  
Alkaline Phosphatase, Total

CPT Codes(s): 84075, 84080  
Test Performed at: ARUP LABS  
Analytic Time: 96 hours (4 days)  
Days Test Performed: All

**Specimen:**

COLLECT: Red Top  
SUBMIT: 2 mL serum REFRIGERATED. Minimum volume 1 mL. Centrifuge and aliquot within 2 hours of collection.  
UNACCEPTABLE: Specimens collected in EDTA, sodium fluoride, sodium citrate, or potassium oxalate. Grossly hemolyzed or lipemic specimens.  
NOTE: Allow serum specimen to clot completely at room temperature. Alternate specimen: Plasma from Green Top (lithium or sodium heparin).

**Alpha-1-Antitrypsin (SERPINA1) Enzyme Concentration and 2 Mutations with Reflex to Alpha-1-Antitrypsin Phenotype**

Panel Code: LAB3038

CPT Codes(s): 82103, 81332  
Test Performed at: ARUP LABS  
Analytic Time: 240 hours (10 days)  
Days Test Performed: Varies

**Specimen:**

COLLECT: Red Top & Lavender Top  
SUBMIT: 0.5 mL serum AND 3 mL whole blood (Lavender Top) REFRIGERATED. Minimum volume 0.5 mL serum AND 0.5 mL whole blood (Lavender Top). Centrifuge and aliquot serum within 2 hours of collection.  
NOTE: Allow serum to clot completely at room temperature. Test includes Alpha-1-Antitrypsin. If AAT protein concentration is less than 90 mg/dL and only one or no deficiency allele is detected by A1A genotyping, then phenotyping (CPT 82104) will be performed and charged.

**Alpha-1-Antitrypsin, Blood**

Panel Code: TRP

CPT Codes(s): 82103  
Test Performed at: FAIRVIEW LABORATORY  
Analytic Time: 168 hours (7 days)  
Days Test Performed: once/week

**Specimen:**

COLLECT: Red Top  
SUBMIT: 0.4 mL serum FROZEN. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.  
UNACCEPTABLE: Samples not separated from cells within 2 hours of collection.



**ALT****Panel Code: ALT****CPT Codes(s):** 84460**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED (up to 7 days). Pediatric minimum volume is 115 uL.

NOTE: Recommend to be tested the same day.

**Amikacin (Amikin®) Level****Panel Code: LAB3025****CPT Codes(s):** 80150**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot ASAP after collection.

UNACCEPTABLE: Processed &gt;4 hours after collection and the patient is receiving beta-lactam antibiotics or cephalosporins.

NOTE: Indicate trough or peak level. Trough levels: Collect immediately prior to the next dose.

Peak levels: Collect 60 minutes after the end of IV infusion; 1-2 hours if decreased renal function. Alternate specimen: Plasma from Lavender Top (EDTA).

**Aminolevulinic Acid (ALA), Random Urine****Panel Code: DAL****CPT Codes(s):** 82135**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 2 mL aliquot of random urine collection (no preservatives) REFRIGERATED.

NOTE: Patient should abstain from alcohol for 24 hours prior to and during testing.



**Amiodarone (Cordarone®) and Metabolite****Panel Code: LAB3051**

N-Desethyl-Amiodarone

**CPT Codes(s):** 80299**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Thu Fri Sat**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Specimen collected in gel separator (SST®), light blue (citrate), or yellow (SPS or ACD solution) tube. Whole blood.

NOTE: Timing of specimen collection: Pre-dose (trough) draw - at steady state concentration.

Alternate specimen: Plasma from Lavender Top (EDTA). Centrifuge and aliquot within 2 hours of collection.

**Amitriptyline (Elavil®) and Nortriptyline****Panel Code: LAB3043**

Nortriptyline

**CPT Codes(s):** 80335**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum centrifuged and aliquoted within 2 hours and REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube or markedly hemolyzed or lipemic or icteric specimen.

NOTE: Recommended collection is 12 hours post dose (trough).

**Ammonia****Panel Code: NH3****CPT Codes(s):** 82140**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: GRN-ICE, SEP&lt;15min

SUBMIT: 2 mL plasma FROZEN within 15 minutes in a separate tube.

UNACCEPTABLE: Specimen hemolyzed or specimen not frozen.

NOTE: Collection tube should be completely filled. Keep green top on ice until centrifuged.



**Ammonia, Arterial****Panel Code: NHA****\*\* AVAILABILITY: Hospital Inpatient Only \*\*****CPT Codes(s):** 82140**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Syringe (Lithium Heparin) on ice

SUBMIT: 2 mL whole blood in a syringe (rinsed with lithium heparin) ON WET ICE.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Specimen should be drawn free of air, immediately corked, mixed well, and placed on wet ice. Transport immediately to laboratory. Analysis at HealthEast Medical Laboratory will be performed on plasma.

**Ammonium, 24 Hour Urine****Panel Code: LAB3070****CPT Codes(s):** 82140**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 4 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and alternative preservatives.

**Amphetamines, Urine, Quantitative****Panel Code: LAB3161**

Amphetamine

MDA (Ecstasy metabolite)

MDEA

MDMA (Ecstasy)

Methamphetamine

Phentermine

**CPT Codes(s):** 80325, 80359**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot of random urine collection Refrigerated. Min: 0.3 mL

UNACCEPTABLE: Specimen exposed to repeated freeze/thaw cycles.

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.



**Amylase****Panel Code: AMY****CPT Codes(s):** 82150**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top/OP Red Top

SUBMIT: 1 mL serum REFRIGERATED (up to 7 days).

UNACCEPTABLE: Hemolyzed specimen.

**Amylase, 2 Hour Urine****Panel Code: A2U****CPT Codes(s):** 82150**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 2 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 2 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

**Amylase, 8 Hour Urine****Panel Code: A8U****CPT Codes(s):** 82150**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 8 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 8 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

**Amylase, Body Fluid****Panel Code: AMF****CPT Codes(s):** 82150**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED.

NOTE: Specimen source is REQUIRED.



**Anaplasma phagocytophilum (HGA) Antibodies,  
IgG and IgM****Panel Code: LAB3127**

**CPT Codes(s):** 86666 x2  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Tue Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED. Minimum volume 0.2 mL.  
**UNACCEPTABLE:** Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens.  
**NOTE:** For Ehrlichia Antibody Panel also order LAB794 Ehrlichia chaffeensis Antibodies, IgG & IgM by IFA.

**Anaplasma Smears, Blood****Panel Code: EHR**

**CPT Codes(s):** 87015, 87207  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top  
**SUBMIT:** 5 mL whole blood ROOM TEMPERATURE received within 24 hours of collection OR buffy coat smears ROOM TEMPERATURE.  
**UNACCEPTABLE:** Peripheral smears if submitted for primary examination without a Lavender Top. Lavender Top older than 24 hours.  
**NOTE:** Positive results will be reported to MDH.

**Androstenedione****Panel Code: ADR**

**CPT Codes(s):** 82157  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** 6-10 am Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. Specimen should be collected between 6-10 a.m. Minimum volume 0.3 mL.  
**NOTE:** Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA).



**Angiotensin Converting Enzyme, CSF****Panel Code: ACC****CPT Codes(s):** 82164**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Spinal fluid in CSF collection tube

SUBMIT: 1.0 mL spinal fluid FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 1 hour of collection.

UNACCEPTABLE: Hemolyzed or xanthochromic specimens. CSF containing gadolinium-based contrast agents.

NOTE: Gadolinium contrast agents have been reported to inhibit ACE activity. Therefore, CSF containing gadolinium-based contrast agents should not be submitted to laboratory for evaluation.

**Angiotensin Converting Enzyme, Serum****Panel Code: ACE****CPT Codes(s):** 82164**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed specimens. EDTA or heparin plasma. Spinal Fluid.

NOTE: Measurement of ACE activity for the evaluation of sarcoidosis is not reliable when ACE inhibitors are present. Serum ACE activity is markedly reduced in patients on ACE inhibitor therapy.

**Antibody Identification****Panel Code: ID****CPT Codes(s):** 86870**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: EDTA-Lavender top

SUBMIT: 4 mL whole blood REFRIGERATED.

UNACCEPTABLE: Incompletely or incorrectly labeled specimens.



**Antibody Screen (HML)****Panel Code: HSC****CPT Codes(s):** 86850**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED.

UNACCEPTABLE: Incompletely or incorrectly labeled specimens. Specimen more than 72 hours old.

NOTE: If indicated, Antibody Identification will be performed and charged separately using CPT code 86870 and code 86886 if titer is indicated. Additional specimen may be required for antibody identification.

**Antibody Titer****Panel Code: LAB1255****CPT Codes(s):** 86886**Test Performed at:** MBC/INNOVATIVE BLOOD RESOURCES**Analytic Time:** 75 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 2 EDTA-Lavender Top + 1 Red top 10mL

SUBMIT: 2 Lavender (EDTA 4 mL) + 1 Red top 10mL

UNACCEPTABLE: Specimen more than 72 hrs old. Markedly hemolyzed specimen. Incompletely or incorrectly labeled specimen.

NOTE: Order an Antibody Screen (HSC/LAB2286) with all Antibody Titers. If positive, an Antibody Identification (ID) will be performed and charged separately using CPT Code 86870. Titers will not be done on specimens with a negative Antibody Screen. A separate CPT Code 86886 will be charged for each titer performed.

**Anti-Mullerian Hormone****Panel Code: LAB3130****CPT Codes(s):** 83520**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum FROZEN. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed or lipemic specimens.

NOTE: Alternate specimen: Plasma from Green Top (Lithium Heparin). Specimen stable Refrigerated 1 week, Frozen 3 weeks (avoid repeated freeze/thaw cycles).





**Anti-Neutrophil Cytoplasmic Antibody, IgG****Panel Code: NCA****CPT Codes(s):** 86255**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.15 mL.

UNACCEPTABLE: Plasma, urine, or other body fluids. Contaminated, hemolyzed, or severely lipemic specimens.

NOTE: Separate serum from cells ASAP or within 2 hours of collection. If the ANCA screen detects antibodies at a 1:20 dilution or greater, then a titer to end point (CPT 86256) will be added at an additional charge. ANCA IFA is simultaneously tested on ethanol- and formalin-fixed slides to allow differentiation of C- and P-ANCA patterns.

**Antinuclear Antibodies Screen (ANA)****Panel Code: ANB****CPT Codes(s):** 86038**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Tue Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Markedly hemolyzed, lipemic, or bacterially contaminated specimens. Body fluids are unacceptable. Specimens &gt;5 days old if not frozen.

NOTE: Serum may be stored up to 2 days at room temperature.

**Antinuclear Antibody (ANA) Cascade****Panel Code: ANE****CPT Codes(s):** 86038**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Tue Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Markedly hemolyzed, lipemic, or bacterially contaminated specimen. Body fluids are unacceptable. Specimens &gt;5 days old if not frozen.

NOTE: If DNA (DS) Antibody and ENA tests are indicated, they will be performed and charged separately using CPT codes 86225 and 86235X6. If Rheumatoid Factor is desired order RQT (LAB1195). Serum may be stored up to 2 days at room temperature.



**Anti-Smith Antibody****Panel Code: ESM****CPT Codes(s):** 86235**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.

**Anti-Smith Antibody/RNP****Panel Code: ERN****CPT Codes(s):** 86235**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.

**Antithrombin III Activity****Panel Code: ATF****CPT Codes(s):** 85300**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: BLU-PltPrPlasmaFZw/4hr

SUBMIT: 1 mL platelet poor plasma from Blue Top (Citrate) tube FROZEN immediately (split evenly between 2 aliquot tubes).

UNACCEPTABLE: Underfilled or overfilled collection tube, clotted specimen, frozen whole blood specimen, whole blood received &gt;4 hours after collection, or platelet-free plasma not frozen within 4 hours of collection.

NOTE: To obtain Platelet Poor Plasma: Centrifuge specimens for 30 minutes at 3000 rpm.

Aliquot plasma (1 mL into each tube) and freeze. If there is limited platelet poor plasma (~1 mL), then aliquot it into 2 tubes. If there is &lt;1 mL of plasma, then aliquot all into 1 tube. Whole blood Blue Top tubes may be sent at ROOM TEMPERATURE if they will arrive at Fairview/UMMC within 4 hours of collection.



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**Anti-Xa Heparin Level****Panel Code: XAH****CPT Codes(s):** 85520**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top, Centrifuge within 1 Hr**SUBMIT:** 3 ml whole blood at ROOM TEMP within 1 hour of collection or 1.5 mL platelet-free plasma centrifuged within 1 hour. Transport platelet-free plasma at room temp within 4 hours of collection. FROZEN platelet-free plasma is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, marked hemolysis, clotted specimen, whole blood received >1 hour of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** Once the whole blood blue top is centrifuged and removed from cells it is acceptable for 4 hours from collection. See the Specimen Collection section of this manual for preparation of platelet-free plasma.

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**Anti-Xa Low Molecular Weight Heparin****Panel Code: XAL****CPT Codes(s):** 85520**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** DBLCent FZin4hr**SUBMIT:** 3 ml whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, marked hemolysis, clotted specimen, whole blood received >4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** See the Specimen Collection section of this manual for preparation of platelet-free plasma.

**APTT Inhibitor Screen****Panel Code: ATI****CPT Codes(s):** 85730, 85732**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top**SUBMIT:** 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, or marked hemolysis, clotted specimen, whole blood received >4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** An APTT will be performed first. If the result is normal the test will be cancelled. See Specimen Collection section of this manual for preparation of platelet-free plasma.**APTT(PTT)****Panel Code: PTT****CPT Codes(s):** 85730**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top**SUBMIT:** 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, or marked hemolysis, clotted specimen, whole blood received >4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** See Specimen Collection section of this manual for preparation of platelet-free plasma.**Aquaporin-4 Receptor Antibody, IgG by IFA with  
Reflex to Titer, Serum****Panel Code: NMO****CPT Codes(s):** 86255**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Wed**Specimen:****COLLECT:** Red Top**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.15 mL.**NOTE:** If AQP4 Receptor Antibody IgG is positive, then an AQP4 antibody IgG titer (CPT 86256) will be added at an additional charge.

**Arbovirus Antibodies, IgG and IgM (CSF)****Panel Code: ARC**

California (LaCrosse) IgG and IgM  
Eastern Equine IgG and IgM  
St. Louis IgG and IgM  
West Nile IgG and IgM  
Western Equine IgG and IgM

**CPT Codes(s):** 86651x2,86652x2, 86653x2,86654x2, 86788, 86789

**Test Performed at:** ARUP LABS

**Analytic Time:** 120 hours (5 days)

**Days Test Performed:** Tue Fri

**Specimen:**

**COLLECT:** Spinal Fluid-2.5 mL min.

**SUBMIT:** 4 mL spinal fluid REFRIGERATED. Minimum volume 2.5 mL.

**UNACCEPTABLE:** Contaminated, heat-inactivated, or hemolyzed specimens.

**Arbovirus Antibodies, IgG and IgM, Serum****Panel Code: ARB**

California (LaCrosse) IgG and IgM  
Eastern Equine IgG and IgM  
St. Louis IgG and IgM  
West Nile Virus Antibody, IgG and IgM  
Western Equine IgG and IgM

**CPT Codes(s):** 86651x2,86652x2, 86653x2,86654x2, 86788, 86789

**Test Performed at:** ARUP LABS

**Analytic Time:** 120 hours (5 days)

**Days Test Performed:** Tue Fri

**Specimen:**

**COLLECT:** Red Top-1 mL Serum

**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Specimen must be centrifuged and aliquoted within 2 hours of collection.

**UNACCEPTABLE:** Contaminated, hemolyzed, or severely lipemic specimens.

**NOTE:** Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens. Mark specimens plainly as "acute" or "convalescent."



**Arginine Vasopressin Hormone****Panel Code: ADH****CPT Codes(s):** 84588**Test Performed at:** ARUP LABS**Analytic Time:** 264 hours (11 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: 3 Lavenders-2.5 mL Plasma min.

SUBMIT: 6 mL plasma FROZEN immediately in an ARUP Standard Transport Tube. Minimum volume 2.5 mL. Specimen must be centrifuged and aliquoted within 2 hours of collection.

UNACCEPTABLE: Non-frozen specimens.

NOTE: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

**Aripiprazole (Abilify®)****Panel Code: ARP****CPT Codes(s):** 80342**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube. NOTE: Trough levels are most reproducible.

\* Days performed varies.

**Arsenic Fractionation, Urine****Panel Code: ASX**

Inorganic Arsenic

Organic Arsenic

**CPT Codes(s):** 82175 x2**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Random Urine in Metal-Free Container

SUBMIT: 10 mL urine REFRIGERATED in a metal-free container.

UNACCEPTABLE: Specimen not received in a metal-free container.

NOTE: Timed collections (24 hour) will be accepted. Performed twice a week.

\*Day(s) test performed varies.



**Arsenic, 24 Hour Urine****Panel Code: ASU****CPT Codes(s):** 82175**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 24 Hour Urine in a Metal-Free Container

SUBMIT: 10 mL aliquot of 24 hour urine collection (metal-free) REFRIGERATED in metal-free container.

UNACCEPTABLE: Specimen not received in a metal-free container. NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

**Arsenic, Whole Blood****Panel Code: ASB****CPT Codes(s):** 82175**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Navy-EDTA-WHLBlood

SUBMIT: 3 mL whole blood using navy top with EDTA (metal free collection tube) REFRIGERATED.

UNACCEPTABLE: Specimen clotted or not received in a metal-free tube.

**Ascorbic Acid (Vitamin C)****Panel Code: LAB3092****CPT Codes(s):** 82180**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tue Wed Thu Sat Sun**Specimen:**

COLLECT: GRN-ICE,SEP&lt;1HR,AMBER

SUBMIT: 0.5 mL plasma FROZEN in amber tube (PROTECT FROM LIGHT). Minimum volume 0.3 mL. Immediately place Green Top specimen on wet ice and protect from light.

Maintain specimen on wet ice and process within 1 hour of collection. Centrifuge at 4C, aliquot plasma into amber vial to protect from light and freeze.

UNACCEPTABLE: EDTA plasma, whole blood, or body fluids. Grossly hemolyzed specimens.

NOTE: Fasting specimen preferred. CRITICAL FROZEN AND LIGHT PROTECTED. Separate specimens must be submitted when multiple tests are ordered. Thawing and refreezing of the specimen and exposure to light will result in decreased Vitamin C concentration.



**Aspergillus fumigatus Antibody, IgG****Panel Code: ASP****CPT Codes(s):** 86606**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed, icteric, or lipemic specimens.

NOTE: Aspergillus fumigatus-specific IgG is one component of testing recommended to establish the diagnosis of allergic bronchopulmonary aspergillosis (ABPA); it is not appropriate for diagnosing invasive aspergillosis.

**Aspergillus Galactomannan Antigen by EIA, Serum****Panel Code: GAL****CPT Codes(s):** 87305**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top-Serum in Sterile Container

SUBMIT: 2 mL serum in a sterile ARUP transport tube (red cap) FROZEN. Minimum volume 1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Plasma. Hemolyzed specimens.

NOTE: Negative results do not exclude the diagnosis of invasive aspergillosis. A single positive test result (index equal to or greater than 0.5) should be clinically correlated by testing a separate serum specimen because many agents (e.g. foods, antibiotics) may cross-react with the test. If invasive aspergillosis is suspected in high-risk patients, serial sampling is recommended. The false-positive rate is higher in children than in adults.

**AST****Panel Code: AST****CPT Codes(s):** 84450**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. Pediatric minimum volume is 115 uL.

UNACCEPTABLE: Hemolyzed specimen.





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**Automated Differential****Panel Code: ADF****CPT Codes(s):** 85004**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED. May require ABN form.

UNACCEPTABLE: Volume less than 1 mL. DO NOT submit only peripheral blood smears.

NOTE: A WBC or HM2 must be ordered with an ADF.

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**B pertussis/parapertussis PCR Nasopharyngeal****Panel Code: PPC****CPT Codes(s):** 87798 x 2**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon, Wed, and Fri**Specimen:**

COLLECT: FLOCKED SWAB IN UTM (RED CAP)

SUBMIT: Flocked swab in Universal Transport Medium (posterior nasopharyngeal collection ONLY) REFRIGERATED.

UNACCEPTABLE: Calcium-algnate swabs (shown to inhibit PCR), dry or moistened cotton swabs, specimens not in proper container or from any other source.

NOTE: Specimens are stable up to 5 days refrigerated. Positives will be reported to MDH.

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**Babesia microti Antibody IgG by IFA****Panel Code: BBM****CPT Codes(s):** 86753**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Wed Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Bacterially contaminated, hemolyzed, or lipemic specimens.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent."



**Babesia Smears, Blood****Panel Code: BAB****CPT Codes(s):** 87015, 87207**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 5 mL whole blood received within 24 hours of collection OR slides from submitting lab for parasite confirmation or identification ROOM TEMPERATURE.

UNACCEPTABLE: Whole blood more than 24 hours old.

NOTE: Indicate travel history when placing order. Positives will be reported to MDH.

**Babesia Species by PCR****Panel Code: LAB3006****CPT Codes(s):** 87798**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top (Whole Blood)

SUBMIT: 1 mL whole blood (EDTA) REFRIGERATED. Minimum volume 0.6 mL.

UNACCEPTABLE: Serum, plasma, and heparinized specimens.

NOTE: This test detects and speciates *B. microti*. The nucleic acid from *B. duncani*, *B. divergens*, strain MO-1, and strain EU-1 will be detected by this test but cannot be differentiated.**Bacterial Antigen Detection****Panel Code: BAD****CPT Codes(s):** 86403 x6**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** All**Specimen:**

COLLECT: CSF Screw-Top OR Plain Red Top OR Urine

SUBMIT: 1.0 mL CSF OR 1.0 mL serum OR 0.5 mL urine REFRIGERATED within 4 hours.

UNACCEPTABLE: Specimen collected in an SST® tube. Specimen at RT more than 4 hours.  
Serum left on clot more than 4 hours.NOTE: Urine is acceptable for Strep pneumo antigen only. If a CSF culture is not ordered or not indicated that it was performed by referring site, one will be ordered and charged. This test detects and differentiates antigens of most serotypes of *Haemophilus influenzae* type b, *Neisseria meningitidis* A, B, C, Y, and W-135, Group B Strep, *Strep pneumoniae*, and *E. coli* K1.

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**Barbiturates, Urine, Quantitative****Panel Code: LAB3162**

Amobarbital  
Butalbital  
Pentobarbital  
Phenobarbital  
Secobarbital

**CPT Codes(s):** 80345**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Tue Thu Sat**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 4mL aliquot random urine collection (no preservative), Refrigerated. (1.5 mL minimum)

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.

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**Bartonella Antibody Panel****Panel Code: BRT**

Bartonella henselae IgG and IgM  
Bartonella quintana IgG and IgM

**CPT Codes(s):** 86611 x4**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 ml serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimen.



**Basic Metabolic Panel****Panel Code: BMP**

Anion Gap, Calculated  
BUN  
Calcium  
Chloride  
CO<sub>2</sub>, Total  
Creatinine  
Glomerular Filtration Rate, estimated (eGFR)  
Glucose  
Potassium  
Sodium

**CPT Codes(s):** 80048

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Centrifuge and separate serum from cells within 4 hours of draw. See the Special Instructions section of this manual for "Potassium Specimen Recommendations".

**Benzodiazepines, Urine, Quantitative****Panel Code: LAB3164**

7-aminoclonazepam  
Alpha-hydroxyalprazolam  
Alpha-hydroxymidazolam  
Alprazolam  
Chlordiazepoxide  
Clonazepam  
Diazepam  
Lorazepam  
Midazolam  
Nordiazepam  
Oxazepam  
Temazepam

**CPT Codes(s):** 80346

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot random urine collection (no preservative), Refrigerated (minimum volume 0.3 mL)

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.



**Beta-2 Transferrin, Body Fluid****Panel Code: B2T****CPT Codes(s):** 86335**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 0.5 mL body fluid FROZEN (nasal,otic,etc.)

NOTE: Direct collection may be done with a pipette, test tube, microcollection device, or syringe.

**Beta-2-Glycoprotein Antibodies, IgG and IgM****Panel Code: BGP**

Beta-2 GP1, IgG

Beta-2 GP1, IgM

**CPT Codes(s):** 86146 x2**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** twice weekly**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum OR plasma FROZEN. Minimum volume 0.2 mL.

UNACCEPTABLE: Hemolyzed, lipemic or microbially contaminated samples. Samples not separated from cells within 2 hours of collection.

NOTE: Separate serum or plasma from cells within 2 hours of collection. Serum or plasma may be refrigerated up to 48 hours.

**Beta-2-Microglobulin, Serum****Panel Code: BMG****CPT Codes(s):** 82232**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon- Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.3 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge at room temperature and aliquot within 2 hours of collection.

UNACCEPTABLE: Samples not separated from cells within 2 hours of collection.



**Beta-hCG Tumor Marker****Panel Code: BTM****CPT Codes(s):** 84702**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon - Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.3 mL serum REFRIGERATED. Minimum volume 0.12 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Samples not separated from cells within 2 hours of collection.

NOTE: Useful in the diagnosis and management of testicular tumors. High levels may be found with choriocarcinoma, embryonal cell carcinoma, ectopic pregnancy, chorioadenoma destruens, and hydatidiform mole. The assay measures both intact hCG and free beta subunits. This test is not to be used for pregnancy.

**Beta-hCG, Qualitative, Serum****Panel Code: PGT****CPT Codes(s):** 84703**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED (2-8°).

UNACCEPTABLE: Specimen &gt; 48 hours old.

NOTE: This assay is approved for use in the early detection of pregnancy only. It is not approved for any other uses such as tumor marker screening or monitoring. Not to be ordered on male patients.

**Beta-hCG, Qualitative, Urine****Panel Code: HQU****CPT Codes(s):** 81025**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 5 mL aliquot of random urine collection (no preservative) REFRIGERATED (2-8°).

UNACCEPTABLE: Volume less than 1 mL. Specimen &gt; 48 hours old.

NOTE: This assay is approved for use in the early detection of pregnancy only. It is not approved for any other uses such as tumor marker screening or monitoring. Not to be ordered on male patients.



**Beta-hCG, Quantitative****Panel Code: HCG****CPT Codes(s):** 84702**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top/OP Red top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

NOTE: This assay is approved for use in the early detection of pregnancy only. It is not approved for any other uses such as tumor marker screening or monitoring. Not to be ordered on male patients.

**Beta-Hydroxybutyrate, Quantitative (replaces Serum Ketone)****Panel Code: LAB3057****CPT Codes(s):** 82010**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days test performed:** All**Specimen:**

COLLECT: IP Green Top/OP Red Top

SUBMIT: 1 ml of serum or plasma (grey or green top-include plasma type on label)  
REFRIGERATED.

Unacceptable: Markedly hemolyzed specimen.

NOTE: Centrifuge and remove serum or plasma from cells within two hours of collection.

Indicate the type of plasma (if applicable) on the aliquot label.

**Bicarbonate, Venous, Calculated****Panel Code: BIC****CPT Codes(s):** 82803**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1 hours**Days Test Performed:** All**Specimen:**

COLLECT: Green Top or Syringe (Lithium Heparin)

SUBMIT: 4 mL whole blood ON WET ICE or 1 mL in a dry Lithium Heparin Syringe. Specimen must arrive within 1 hour of collection.

NOTE: Specimen should be drawn free of air and mixed well, and placed on wet ice. Transport immediately to laboratory. DO NOT REMOVE CORK BEFORE TESTING.



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**Bile Acids, Total****Panel Code: BIL**

**CPT Codes(s):** 82239  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top (Fasting 8 hours)  
**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Body fluids. Heparinized specimens. Hemolyzed specimens.  
**NOTE:** Patient fasting 8 hours. Acceptable to draw non-fasting when patient is pregnant and is being evaluated for cholestasis.

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**Bilirubin Panel****Panel Code: BLP**

Direct Bilirubin  
Indirect Bilirubin, Calculated  
Total Bilirubin

**CPT Codes(s):** 82247, 82248  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top (Protect from Light)  
**SUBMIT:** 1 mL serum REFRIGERATED. Keep out of light as much as possible.  
**UNACCEPTABLE:** Hemolyzed specimen.

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**Bilirubin, Cord Blood****Panel Code: CBL**

**CPT Codes(s):** 82247  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top (Protect from Light)  
**SUBMIT:** 3 mL cord blood REFRIGERATED. Keep out of light as much as possible.

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**Bilirubin, Direct****Panel Code: DBL****CPT Codes(s):** 82248**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (Protect from Light)

SUBMIT: 1 mL serum REFRIGERATED. Keep out of light as much as possible.

UNACCEPTABLE: Hemolyzed specimen.

**Bilirubin, Neonatal Panel****Panel Code: BLN**

Direct Bilirubin

Indirect Bilirubin, Calculated

Total Bilirubin

**CPT Codes(s):** 82247, 82248**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top Microtainer Tube (No Light)

SUBMIT: 0.5 mL serum REFRIGERATED in Red Top Microtainer Tube. Keep out of light as much as possible.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Only to be ordered on neonate. Report includes time of birth and age calculated in hours. Order only up to two months of age.

\* Date and time of birth is required.

**Bilirubin, Neonatal Total****Panel Code: TBN****CPT Codes(s):** 82247**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top Microtainer Tube (No Light)

SUBMIT: 0.5 mL serum REFRIGERATED in Red Top Microtainer Tube. Keep out of light as much as possible.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Only to be ordered on neonate. Report includes time of birth and age calculated in hours. Order only up to two months of age.

\* Date and time of birth is required.



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**Bilirubin, Total****Panel Code: TBL****CPT Codes(s):** 82247**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (Protect from Light)

SUBMIT: 1 mL serum REFRIGERATED. Keep out of light as much as possible. Pediatric minimum volume is 115 uL.

UNACCEPTABLE: Hemolyzed specimen.

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**BK Virus DNA Quantitative Real Time PCR****Panel Code: QBK****CPT Codes(s):** 87799**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** 3 times a week**Specimen:**

COLLECT: Lav Top Plasma OR Urine.

SUBMIT: 1 mL EDTA plasma OR urine REFRIGERATED. Minimum volume 0.5 mL.

UNACCEPTABLE: Preserved urine.

NOTE: Specimen source is required. Testing performed on plasma and urine only. Urine must not be in any preservatives.

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**Blastomyces Antibodies by Immunodiffusion****Panel Code: BST****CPT Codes(s):** 86612**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Body fluids.

**Blood Gases, Arterial****Panel Code: ABG**

Base Excess, Arterial, Calculated  
HCO<sub>3</sub>, Arterial, Calculated  
O<sub>2</sub> Saturation, oxyhemoglobin  
PCO<sub>2</sub>, Arterial  
pH, Arterial  
PO<sub>2</sub>, Arterial

**CPT Codes(s):** 82805

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Syringe (Lithium Heparin)

**SUBMIT:** 1 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 60 minutes on WET ICE (2-8 C).

**NOTE:** Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C). Include oxygen therapy type, oxygen quantity (e.g., 2L, 40%) and patient temperature.

**Blood Gases, Arterial Cord****Panel Code: ACB**

**\*\* Availability: St. John's and Woodwinds Hospitals Only \*\***

Base Excess, Cord Arterial, Calculated  
HCO<sub>3</sub>, Cord Arterial  
PCO<sub>2</sub>, Cord Arterial  
pH Cord Arterial  
PO<sub>2</sub>, Cord Arterial

**CPT Codes(s):** 82803

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Syringe (Lithium Heparin)

**SUBMIT:** 1 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 60 minutes on WET ICE (2-8 C).

**NOTE:** Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C). This testing is performed on registered inpatients only.



**Blood Gases, Capillary****Panel Code: ABC**

Base Excess, Capillary, Calculated  
HCO<sub>3</sub>, Capillary, Calculated  
O<sub>2</sub> Saturation, oxyhemoglobin  
PCO<sub>2</sub>, Capillary  
pH, Capillary  
PO<sub>2</sub>, Capillary

**CPT Codes(s):** 82805

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Capillary Tube, Balanced Heparin

**SUBMIT:** 230 uL whole blood in a capillary tube (balanced heparin). Acceptable 30 minutes at RT. DO NOT ICE.

**NOTE:** Specimen should be drawn free of air, both ends capped, and mixed well. Transport IMMEDIATELY to laboratory. Testing must be completed within 30 minutes.

**Blood Gases, Venous****Panel Code: VBG**

Base Excess, Calculated  
Bicarbonate, Calculated  
O<sub>2</sub> Saturation, oxyhemoglobin  
PCO<sub>2</sub>  
pH  
PO<sub>2</sub>

**CPT Codes(s):** 82805

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Syringe (Lithium Heparin)

**SUBMIT:** 1 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 60 minutes on WET ICE (2-8 C).

**NOTE:** Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C).



**Blood Gases, Venous Cord****Panel Code: VCB**

\*\* Availability: St. John's and Woodwinds Hospital Inpatient Only \*\*

Base Excess, Calculated

Bicarbonate, Calculated (HC03)

PCO2

pH

PO2

**CPT Codes(s):** 82803

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test Performed:** All

**Specimen:**

COLLECT: Syringe (Lithium Heparin)

SUBMIT: 1 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 60 minutes on WET ICE (2-8 C).

NOTE: Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C). This testing is performed on registered inpatients only.

**BNP(B-type Natriuretic Peptide)****Panel Code: BNP**

**CPT Codes(s):** 83880

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

COLLECT: LAV Plasma FRZ > 4HR

SUBMIT: 1 mL plasma FROZEN within 4 hours in a separate tube.

UNACCEPTABLE: Whole blood specimen at room temperature for >4 hours or whole blood specimen at refrigerated temperature for >24 hours.

NOTE: HML Clients: Plasma specimens, stored at room temperature must be tested within 4 hours of collection. Thus, it is recommended to freeze plasma within 4 hours.



**Bone Specific Alkaline Phosphatase****Panel Code: BAP****CPT Codes(s):** 84080**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum FROZEN. Minimum volume 0.3 mL. CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

UNACCEPTABLE: Grossly hemolyzed specimens.

NOTE: Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin). Liver alkaline phosphatase can affect the measurement of bone specific alkaline phosphatase in this assay. Each 100 U/L of liver alkaline phosphatase contributes an additional 2.5 to 5.8 µg/L to the bone specific alkaline phosphatase result.

**Borrelia Species by PCR (Lyme Disease)****Panel Code: LPR****CPT Codes(s):** 87476**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: SST® OR CSF or Synovial Fluid in a sterile screw-top tube

SUBMIT: 1 mL serum, plasma, CSF or synovial fluid in a sterile container FROZEN. Minimum volume 0.5 mL.

UNACCEPTABLE: Heparinized specimens.

NOTE: Specimen source is REQUIRED. Alternate specimen: Tissue in a sterile container FROZEN immediately (Ambient or Refrigerated tissue is unacceptable.)

**BUN****Panel Code: BUN****CPT Codes(s):** 84520**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.



**Buprenorphine and Metabolites, Urine, Quantitative****Panel Code: CBU**

Buprenorphine  
Buprenorphine Gluc  
Naloxone  
Norbuprenorphine  
Norbuprenorphine Gluc

**CPT Codes(s):** 80299

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Random Urine in Screw-Top container

**SUBMIT:** 2 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.

**NOTE:**

**Buprenorphine, Urine****Panel Code: BUP**

**CPT Codes(s):** 80307

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container

**SUBMIT:** 20 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 7 days. Cap IMMEDIATELY after collection.

**NOTE:** This test is not intended for medico-legal purposes. This test is for screening only.

Confirmations are available upon request at an additional charge.

**C. difficile Toxigenic by PCR****Panel Code: CDI**

**CPT Codes(s):** 87493

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Stool in Sterile Screw-top Container

**SUBMIT:** Fresh unformed stool in sterile screw top container. Room temperature (20-30°C) for 24 hours. Refrigerated (2-8°C) up to 5 days.

**UNACCEPTABLE:** Specimens from patients <2 years of age, preserved stool (i.e. stool in Cary-Blair- Based transport media), Formed stool, rectal swabs, Frozen stool, Stool not refrigerated within acceptable time limits stated above. Repeat testing within 7 days will be rejected.

**NOTE:** Repeat testing for cure is not advised. Test is performed between 7 AM-3:30 PM only.



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**C1-Esterase Inhibitor****Panel Code: C1S****CPT Codes(s):** 86160**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Wed Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN in separate tube. Minimum volume 0.4 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Non-frozen specimens.

NOTE: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

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**C1-Esterase Inhibitor Functional****Panel Code: FNC****CPT Codes(s):** 86161**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Wed Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum FROZEN. Minimum volume 0.1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Non-frozen specimens.

NOTE: Alternate specimen: Plasma from Lavender Top (EDTA). Separate specimens must be submitted when multiple tests are ordered.

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**CA 125 (Cancer Antigen 125)****Panel Code: C12****CPT Codes(s):** 86304**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN. Acceptable refrigerated up to 7 days. May require ABN form.

UNACCEPTABLE: Hemolyzed or lipemic specimen.

NOTE: This test is not useful as a screening assay for cancer detection in the normal population. Normal levels do not rule out recurrence of ovarian carcinoma.





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**CA 27.29, Breast Tumor Marker****Panel Code: CAB**

**CPT Codes(s):** 86300  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1.25 mL serum FROZEN in a separate tube. Minimum volume 0.2 mL. May require ABN form.  
**UNACCEPTABLE:** Gross hemolysis.  
**NOTE:** Specimen stable Refrigerated 48 hours.

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**Caffeine****Panel Code: LAB3024**

**CPT Codes(s):** 80155  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Plain Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED (minimum volume: 0.3 mL).  
**UNACCEPTABLE:** Specimen markedly hemolyzed.  
**NOTE:** Centrifuge and remove serum from cells within 2 hours of draw.

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**Calcitonin****Panel Code: CTN**

**CPT Codes(s):** 82308  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top-2 mL Serum  
**SUBMIT:** 2 mL serum REFRIGERATED. Minimum volume 1 mL. Specimen must be centrifuged and aliquoted within 2 hours of collection.  
**UNACCEPTABLE:** Grossly hemolyzed or lipemic specimens.  
**NOTE:** Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin). Centrifuge and aliquot within 2 hours of collection.

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**Calcium****Panel Code: CA****CPT Codes(s):** 82310**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

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**Calcium, 24 Hour Urine****Panel Code: CAU****CPT Codes(s):** 82340**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (HCL) pH 2.0

SUBMIT: 10 mL aliquot of 24 hour urine collection (preserved with 20 mL of 6N HCl at start of collection) REFRIGERATED. Adjust pH to 2.0.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and alternate preservatives.

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**Calcium, Ionized, Measured****Panel Code: ICA****CPT Codes(s):** 82330**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Syringe (Lithium Heparin) or full green top

SUBMIT: 1 ml whole blood in a lithium heparin syringe or a full green top tube. Both acceptable 30 minutes at RT or up to 4 hours on WET ICE (2-8 C).

UNACCEPTABLE: SST tubes and centrifuged specimens.

NOTE: Specimen should be drawn free of air and mixed well. DO NOT REMOVE CORK. If transport will be greater than 30 minutes, place on WET ICE (2-8 C). Performed on whole blood only.



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**Calcium, Random Urine****Panel Code: UCA****CPT Codes(s):** 82310**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine pH 2.0

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED within 4 hours of collection. Adjust pH to 2.0.

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**Calcium/Creatinine Ratio, Urine****Panel Code: CCR**

Calcium, Urine

Calcium/Creatinine, Urine

Creatinine, Urine

**CPT Codes(s):** 82310, 82570**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED within 4 hours of collection.

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**Calculi (Stone) Analysis****Panel Code: KSA****CPT Codes(s):** 82365**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Screw-capped container

SUBMIT: Air-dry calculi and transfer to an ARUP Standard Transport Tube. Larger calculi specimens may be transferred to a clean, empty urine cup (150 mL) or similar container. ROOM TEMPERATURE.

UNACCEPTABLE: Any collection or shipping container with a needle attached.

NOTE: Calculi specimens transported in liquid or contaminated with blood require special handling which will delay analysis. Specimens that are wrapped in tape or embedded in wax will delay or prevent analysis and should not be submitted.analysis.



**California Virus (La Crosse) Antibodies, IgG and IgM****Panel Code: CLA**

**CPT Codes(s):** 86651 x2  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**  
COLLECT: Red Top  
SUBMIT: 0.5 mL serum REFRIGERATED.  
UNACCEPTABLE: Markedly hemolyzed or lipemic specimen.

**Calprotectin, Feces****Panel Code: LAB3062**

**CPT Codes(s):** 83993  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** Twice per week

**Specimen:**  
COLLECT: Screw-Top Container  
SUBMIT: 5 g stool in a separate screw-top container, FROZEN. Minimum volume 1 g.  
UNACCEPTABLE: Stool in media or preservative; stool in contact with diaper; stool not processed within 10 days of collection; stool not frozen within 4 days of collection; specimen transport temperature exceeds 30C.  
NOTE: Samples must be received and processed by testing laboratory within 10 days of collection. Specimen stable Refrigerated up to 4 days, Freeze if > 4 days before testing is performed.

**Cancer Antigen-GI (CA 19-9)****Panel Code: CGI**

**CPT Codes(s):** 86301  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**  
COLLECT: Red Top  
SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection. May require ABN form.  
UNACCEPTABLE: Body Fluid. Specimens collected in sodium citrate.  
NOTE: Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin) or Lavender Top (EDTA).



**Carbamazepine (Tegretol®)****Panel Code: CAR****CPT Codes(s):** 80156**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Specimen collected in an SST® tube.

**Carbamazepine-10,11-Epoxyde****Panel Code: POX****CPT Codes(s):** 80156**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are most reproducible.

**Carbon Dioxide (CO2)****Panel Code: CO2****CPT Codes(s):** 82374**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimize exposure to room air. Immediately recap serum aliquot tube after separation from cells.

**Carboxyhemoglobin****Panel Code: CO****CPT Codes(s):** 82375**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test performed:** All**Specimen:**

COLLECT: Syringe (Lithium Heparin)

SUBMIT: 4 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 72 hours on WET ICE (2-8 C).

NOTE: Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C).



**Cardiolipin Antibodies, IgG and IgM****Panel Code: LAB3082**

**CPT Codes(s):** 86147 x 2  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** Mon- Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 2 mL serum Refrigerated . Minimum volume 0.7 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Gross hemolysis. Samples not separated from cells within 2 hours of collection.  
**NOTE:** Alternate specimen: Plasma from Green Top (lithium or sodium heparin)

**Cardiolipin Antibody, IgA****Panel Code: ACA**

**CPT Codes(s):** 86147  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.35 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Gross hemolysis. Samples not separated from cells within 2 hours of collection.  
**NOTE:** Alternate specimen: Plasma from Green Top (lithium or sodium heparin).

**Carisoprodol and Meprobamate, Urine, Quantitative****Panel Code: LAB3211**

Carisoprodol  
Meprobamate

**CPT Codes(s):** 80369  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 144 hours (6 days)  
**Days Test Performed:** Sun Tue Thu

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container  
**SUBMIT:** 2 mL aliquot of random urine collection (no preservative). REFRIGERATED. Minimum volume 0.7 mL  
**NOTE:**



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**Carnitine, Total and Free****Panel Code: CRN****CPT Codes(s):** 82379**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum FROZEN in a separate tube.

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**Catecholamine Fractionation, Free, Plasma****Panel Code: CAP**

Dopamine

Epinephrine

Norepinephrine

**CPT Codes(s):** 82384**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Thu Fri**Specimen:**

COLLECT: 2 Prechilled Catecholamine Tubes

SUBMIT: 4 mL plasma (EDTA-Na metabisulfite) FROZEN immediately in a separate tube.

Specimen must be collected from indwelling catheter.

UNACCEPTABLE: Specimen not collected through indwelling catheter. Markedly hemolyzed specimen. Suggest Metanephrines, plasma as a substitute.

NOTE: Discontinue drugs that release epinephrine, norepinephrine or dopamine. No tobacco, caffeine or food for 4 hours. Insert indwelling catheter. Patient must rest 30 minutes. Waste 3.0 mL of blood, then draw 20 mL blood, place in prechilled tubes.



**Catecholamines Fractionated by LC-MS/MS, Urine****Panel Code: CTU****Free**

Dopamine  
Epinephrine  
Norepinephrine

**CPT Codes(s):** 82384

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** 24 Hr Ur (pH 2-4)

**SUBMIT:** 4 mL aliquot (from well mixed 24 hour urine collection) REFRIGERATED during and after collection transferred to ARUP tube with 20 mg sulfamic acid OR adjust pH to 2.0-4.0 with HCl. Minimum volume 2.5 mL.

**UNACCEPTABLE:** Room temperature specimen. Specimen preserved with boric acid or acetic acid. Specimen with pH greater than 7.

**NOTE:** Total volume (mL) and collection time interval (hours or random) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

Drugs and medications may affect results and should be discontinued for at least 72 hours prior to specimen collection, if possible.

Transfer a 4 mL aliquot (Min: 2.5 mL) to an ARUP Standard Transport Tube containing 20 mg sulfamic acid OR adjust pH to 2.0-4.0 with 6M HCl.

Alternate specimen: random urine collection with aliquot acidified. The optimal specimen for this testing is a 24-hour urine collection.

Mass per day calculations are not reported for patients younger than 4 years of age and for the following specimen types: a random collection, a collection with duration of less than 20 hours, a collection with duration of greater than 28 h\*

**CCP Antibodies****Panel Code: ACP**

**CPT Codes(s):** 86200

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** Tue Thu

**Specimen:**

**COLLECT:** RED TOP

**SUBMIT:** 1 mL serum REFRIGERATED up to 7 days then FREEZE.

**UNACCEPTABLE:** Room temperature storage for greater than 22 hours.





**CEA (Carcinoembryonic Antigen)****Panel Code: CEA****CPT Codes(s):** 82378**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days. May require ABN form.

UNACCEPTABLE: Markedly hemolyzed specimen.

**Celiac (Gluten) Antibody Panel****Panel Code: CGL**

Gliadin IgA

Gliadin IgG

Tissue Transglutaminase IgA

Tissue Transglutaminase IgG

Total IgA

**CPT Codes(s):** 82784, 83516 x4**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 3 mL serum REFRIGERATED; FROZEN if not submitted within 48 hours. Pediatric minimum volume is 1.5 mL

UNACCEPTABLE: Specimens &gt; 48 hours old if not frozen. Markedly hemolyzed or lipemic specimens.

**Cell Ct/Diff, Body Fluid****Panel Code: CBF****CPT Codes(s):** 89051**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lav or Red Top or Sterile Tube

SUBMIT: 2 to 15 mL body fluid REFRIGERATED. Fluid should be sent immediately to the laboratory to avoid cellular degeneration.

UNACCEPTABLE: Specimen &gt; 24 hours old.

NOTE: Specimen source is REQUIRED.



**Cell-Bound Platelet Autoantibody Screen, Blood****Panel Code: LAB3073****CPT Codes(s):** 86023**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: 4 Lavender Tops-Whole Blood

SUBMIT: 20 mL whole blood AMBIENT.

UNACCEPTABLE: Clotted, centrifuged, refrigerated, frozen or specimen older than 48 hours.

NOTE: The patient must have a platelet count &gt;10000 mm(3). Specimen must arrive within 48 hours. Draw specimen Mon-Thurs only and not before a holiday.

**Centromere Antibody, IgG****Panel Code: CEN****CPT Codes(s):** 86235**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Severely lipemic or hemolyzed specimens.

NOTE: Alternate specimen: Plasma from Green Top (Lithium Heparin) or Lavender Top (EDTA). Centrifuge and aliquot within 2 hours of collection.

**Ceruloplasmin****Panel Code: CPN****CPT Codes(s):** 82390**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Once a week**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum FROZEN. Minimum volume 0.25 mL. Centrifuge and aliquot ASAP after collection.

UNACCEPTABLE: Severely lipemic or grossly hemolyzed specimens.

NOTE:



**Chikungunya Antibodies, IgG and IgM****Panel Code: LAB3129****CPT Codes(s):** 86790 x2**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Wed**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute or convalescent".

**Chlamydia Antibody Panel, IgG & IgM by IFA****Panel Code: CLM**

Chlamydia pneumoniae IgG &amp; IgM

Chlamydia psittaci IgG &amp; IgM

Chlamydia trachomatis IgG &amp; IgM

**CPT Codes(s):** 86631 x 3, 86632 x3**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, hemolyzed, or hyperlipemic sera.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens. Mark specimens plainly as "acute" or "convalescent."



**Chlamydia trachomatis & Neisseria gonorrhoeae,  
Amplified Detection****Panel Code: CGA****CPT Codes(s):** 87491, 87591**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** APTIMA Swab OR First-catch Urine**SUBMIT:** Aptima (Blue) swab in Aptima UNISEX Specimen Collection Kit for ENDOCERVICAL and Male URETHRAL sources OR Aptima (Orange) swab in Aptima VAGINAL Specimen Collection Kit for VAGINAL source OR 2 mL urine in Aptima Urine Specimen Transport Tube REFRIGERATED. See the Specimen Collection section of this manual for collection instructions.**UNACCEPTABLE:** Large cleaning swab, eye or rectal (non-urogenital) source, or urine specimen >30 mL or not transferred to Aptima transport tube within 24 hours or use of inappropriate specimen collection kit for specimen source type.**NOTE:** Specimen source is REQUIRED. This test should not be used for the diagnosis of genital tract infections in prepubertal children for possible sexual abuse. Do not use spermicidal or feminine powder sprays prior to collection. The performance of this assay has not been evaluated in adolescents less than 16 years of age.**Chlamydia trachomatis by PCR, Non-genital****Panel Code: CNA****CPT Codes(s):** 87491**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:****COLLECT:** Aptima® Unisex (Blue Shaft) Swab**SUBMIT:** Aptima® Unisex Collection Swab (blue shaft) of eye, throat, or rectum source in Aptima® Unisex Swab Specimen Transfer Tube REFRIGERATED.**UNACCEPTABLE:** Transport tube containing a swab not included in the collection kit , a large white cleaning swab, more than 1 swab, no collection swab.**NOTE:** Specimen source is REQUIRED. Eye, throat, rectum (perirectal acceptable) specimens only. These specimens are not FDA approved for this assay. Discard the white cleaning swab. It is a cleaning swab and should NOT be used for collection. The same specimen can be used for Chlamydia and Gonorrhea testing. Specimens should be sent in individual bags to limit the possibility of cross contamination.

**Chlamydia trachomatis, Amplified Detection****Panel Code: CHA****CPT Codes(s):** 87491**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: APTIMA® Swab or First-Catch Urine

SUBMIT: Aptima (Blue) swab in Aptima UNISEX Specimen Collection Kit for ENDOCERVICAL and Male URETHRAL sources OR Aptima (Orange) swab in Aptima VAGINAL Specimen Collection Kit for VAGINAL source OR 2 mL urine in Aptima Urine Specimen Transport Tube REFRIGERATED. See the Specimen Collection section of this manual for collection instructions.

UNACCEPTABLE: Large cleaning swab, eye or rectal (non-urogenital) source, or urine specimen &gt;30 mL or not transferred to Aptima transport tube within 24 hours or use of inappropriate specimen collection kit for specimen source type.

NOTE: Specimen source is REQUIRED. This test should not be used for the diagnosis of genital tract infections in prepubertal children for possible sexual abuse. Do not use spermicidal or feminine powder sprays prior to collection. The performance of this assay has not been evaluated in adolescents less than 16 years of age.

**Chloride****Panel Code: CL****CPT Codes(s):** 82435**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

**Chloride, 24 Hour Urine****Panel Code: CLU****CPT Codes(s):** 82436**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.



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**Chloride, Random Urine****Panel Code: UCL****CPT Codes(s):** 82436**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.

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**Cholesterol, Body Fluid****Panel Code: CHF****CPT Codes(s):** 82465**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED.

NOTE: Specimen source is REQUIRED.

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**Cholesterol, Total****Panel Code: CHO****CPT Codes(s):** 82465**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Markedly hemolyzed specimen.



**Chromium, Serum****Panel Code: LAB3085**

**CPT Codes(s):** 82495  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Clot30 Cent-Pour MetF  
**SUBMIT:** 2 mL serum from navy blue top (no additive) ROOM TEMPERATURE in a metal-free tube. Minimum volume 0.5 mL.  
**UNACCEPTABLE:** Separator tubes. Specimens that are not separated from the red cells or clot within 2 hours.  
**NOTE:** Diet, medication, and nutritional supplements may introduce interfering substances. Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential over-the-counter medications for one week prior to sample draw. Centrifuge and pour off serum ASAP or within 2 hours of collection to an ARUP Trace Element-Free Transport Tube. Preferred test for evaluating metal ion release from metal-on-metal joint arthroplasty. May be useful in the assessment of deficiency or overload. For the assessment of hexavalent chromium exposure, chromium in blood or RBCs is preferred.

**Chromogranin A****Panel Code: CRA**

**CPT Codes(s):** 86316  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 144 hours (6 days)  
**Days Test Performed:** Mon Wed Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL.  
**UNACCEPTABLE:** Plasma.  
**NOTE:** Allow serum specimen to clot completely at room temperature.

**Chromosome Analysis, Amniotic Fluid****Panel Code: CAM**

**CPT Codes(s):** 88235, 88269, 88280, 88285  
**Test Performed at:** Hennepin County Medical Center  
**Analytic Time:** 240 hours (10 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Amniotic Fluid in Screw-Top Containers  
**SUBMIT:** 20 mL amniotic fluid ROOM TEMPERATURE. Preferred gestational age, 14-16 weeks.  
**NOTE:** Specimen must arrive at HML by 2 P.M., Monday-Friday. Must include diagnosis, family history and other pertinent information.



**Chromosome Analysis, Blood****Panel Code: CBD****CPT Codes(s):** 88237,88264,88280**Test Performed at:** Hennepin County Medical Center**Analytic Time:** 336 hours (14 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Sodium Heparin Tube

SUBMIT: 5 mL (pediatric-2 mL) whole blood ROOM TEMPERATURE. Clinic:specimen must arrive by 2 P.M., Monday-Friday.

UNACCEPTABLE: LITHIUM Heparin green top tube, refrigerated, clotted or centrifuged specimens.

NOTE: Must include diagnosis, family history and other pertinent information.

**Chromosome Analysis, Bone Marrow****Panel Code: CBM****CPT Codes(s):** 88237, 88264, 88280**Test Performed at:** Hennepin County Medical Center**Analytic Time:** 240 hours (10 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Sodium Heparin Tube

SUBMIT: 2-5 mL bone marrow anticoagulated with SODIUM Heparin ROOM TEMPERATURE. Specimen must arrive by 2 P.M., Monday-Friday.

UNACCEPTABLE: LITHIUM Heparin green top tube or refrigerated specimen.

NOTE: Must include diagnosis, family history and other pertinent information.

**Citrate, 24 Hour Urine****Panel Code: CIU****CPT Codes(s):** 82507**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of a 24 hour collection (specimen must be refrigerated at all times) .

UNACCEPTABLE: Specimen not kept refrigerated during the collection time or during transport.

NOTE: Total volume (mL) REQUIRED.





**CK, Total****Panel Code: CK****CPT Codes(s):** 82550**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed specimen.

**Clomipramine (Anafranil®)****Panel Code: CPM**

Desmethylclomipramine

**CPT Codes(s):** 80335**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are most reproducible.

\* Days performed varies

**Clonazepam and 7-Aminoclonazepam****Panel Code: LAB3063****CPT Codes(s):** 80346**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tues Thu**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1.2 mL serum REFRIGERATED. Serum must be separated from cells within 2 hours of draw.

UNACCEPTABLE: Specimen collected in an SST® tube. Specimen markedly icteric.

NOTE: Draw specimen before next scheduled dose (minimum 12 hours after last dose).

Therapeutic ranges are for specimens drawn at trough timing.



**Clozapine**

Panel Code: CZP

Clozapine-N-Oxide  
Norclozapine

CPT Codes(s): 80159

Test Performed at: ARUP LABS

Analytic Time: 72 hours (3 days)

Days Test Performed: All

**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).

NOTE: Preferred specimen is pre-dose (trough) draw - at steady state concentration. Alternate specimen: Plasma from Lavender Top (EDTA) - centrifuge and aliquot within 2 hours of collection.

**Cobalt, Serum or Plasma**

Panel Code: LAB3086

CPT Codes(s): 83018

Test Performed at: ARUP LABS

Analytic Time:

Days Test Performed: Mon Tue Wed Thur Fri Sat Sun

**Specimen:**

COLLECT: Clot30 Cent-Pour MetF

SUBMIT: 2 mL serum from navy blue top (no additive) ROOM TEMPERATURE in a metal-free tube. Minimum volume 0.5 mL.

UNACCEPTABLE: Separator tubes. Specimens that are not separated from the red cells or clot within 2 hours.

NOTE: Diet, medication, and nutritional supplements may introduce interfering substances.

Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential over-the-counter medications for one week prior to sample draw. Centrifuge and transfer serum or plasma ASAP or within 2 hours of collection to an ARUP Trace Element-Free Transport Tube.

**Cocaine Metabolite Quantitation, Urine**

Panel Code: LAB3166

CPT Codes(s): 80353

Test Performed at: ARUP LABS

Analytic Time: 96 hours (4 days)

Days Test Performed: All

**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 4 mL aliquot random urine collection (no preservative), Refrigerated (1.5 mL minimum)

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.



**Coccidioides Antibody by CF****Panel Code: CCC**

**CPT Codes(s):** 86635 x3  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1.0 mL serum REFRIGERATED. Minimum volume 0.4 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Hemolyzed, icteric, or lipemic specimens.  
**NOTE:** Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens. Mark specimens plainly as "acute" or "convalescent." CF measures both IgM and IgG. As single antibody titers are generally not diagnostic, paired specimens are preferred. Acute and convalescent specimens (drawn at least 21 days apart), showing at least a fourfold rise in titer, are diagnostic.

**Cold Agglutinin Titer****Panel Code: COA**

**CPT Codes(s):** 86156  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 72 hours (3 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri Sun

**Specimen:**

**COLLECT:** Plain Red Top on warm pack  
**SUBMIT:** 4 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Specimen collected in an SST® tube.  
**NOTE:** Clot red top for 30 minutes at 37°C. Centrifuge, remove serum ASAP. For Mycoplasma pneumoniae, order panel MYC (LAB656).

**Complement Activity Total, (CH50)****Panel Code: C50**

**CPT Codes(s):** 86162  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Plain Red Top  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL. Allow specimen to clot for one hour at room temperature. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Separator (MARBLE TOP-SST) tubes. Specimens left to clot at 2-8°C (refrigerated). Specimens exposed to repeated freeze/thaw cycles. Non-frozen specimens. Grossly hemolyzed or severely lipemic specimens.  
**NOTE:** CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered. Stability: After separation from cells: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month.



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**Complement, C'3****Panel Code: C3****CPT Codes(s):** 86160**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 3 days.

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**Complement, C'4****Panel Code: C4****CPT Codes(s):** 86160**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 2 days.

UNACCEPTABLE: Markedly hemolyzed specimens.



**Comprehensive Metabolic Panel****Panel Code: CMP**

Albumin  
Albumin/Globulin Ratio, Calc  
Alkaline Phosphatase  
ALT (SGPT)  
Anion Gap, Calc  
AST (SGOT)  
Bilirubin, Total  
BUN  
Calcium  
Chloride  
CO<sub>2</sub>, Total  
Creatinine  
Glomerular Filtration Rate, estimated (eGFR)  
Glucose  
Potassium  
Protein, Total  
Sodium

**CPT Codes(s):** 80053

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top

**SUBMIT:** 1 mL serum REFRIGERATED. Keep out of light as much as possible. May require ABN form. Pediatric minimum volume is 280 uL.

**UNACCEPTABLE:** Hemolyzed specimen.

**NOTE:** Centrifuge and separate serum from cells within 4 hours of draw.

**Copper, 24 Hour Urine****Panel Code: CUU**

**CPT Codes(s):** 82525

**Test Performed at:** MEDTOX (MTO)

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** 24 Hour Urine in a Metal-Free Container

**SUBMIT:** 10 mL aliquot of 24 hour urine collection (metal-free) REFRIGERATED in a metal-free container.

**UNACCEPTABLE:** Specimen not received in a metal-free container.

**NOTE:** Total volume (mL) REQUIRED.



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**Copper, Serum or Plasma****Panel Code: SCU****CPT Codes(s):** 82525**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Cent-Pour MetF

SUBMIT: 2 mL serum from navy blue top (no additive) ROOM TEMPERATURE in a metal-free tube. Minimum volume 0.5 mL.

UNACCEPTABLE: Separator tubes. Specimens that are not separated from the red cells or clot within 2 hours.

NOTE: Diet, medication, and nutritional supplements may introduce interfering substances.

Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential over-the-counter medications for one week prior to sample draw. Centrifuge and pour off serum or plasma ASAP or within 2 hours of collection to an ARUP Trace Element-Free Transport Tube.

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**Cord Blood Evaluation****Panel Code: CRG****CPT Codes(s):** 86880, 86900, 86901**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 1 mL Cord Blood REFRIGERATED.

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**Cortisol****Panel Code: CTL****CPT Codes(s):** 82533**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top/OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

NOTE: Exact time of collection is REQUIRED.



**Cortisol Urine Free by LC-MS/MS****Panel Code: COU****CPT Codes(s):** 82530**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 4 mL aliquot (from well mixed 24 hour urine collection) REFRIGERATED during and after collection. Minimum volume 1 mL.

UNACCEPTABLE: Room Temperature specimen. Acidified specimen or specimen with preservative.

NOTE: Total volume (mL) and collection time interval (hours or random) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

Alternate specimen: random urine collection. The optimal specimen for this testing is a 24-hour urine collection.

Mass per day calculations are not reported for the following specimen types: a random collection, a collection with duration of less than 20 hours or greater than 28 hours, or a collection with total volume less than 400 mL or greater than 5000 mL. Ratios to creatinine may be useful for these evaluations. Refer to <http://ltd.aruplab.com/Tests/Pub/0097222>.**Cortisol, Post-Dexamethasone****Panel Code: DXP****CPT Codes(s):** 82533**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green / OP Red (Fasting)

SUBMIT: 1 mL serum REFRIGERATED.

NOTE: Patient is drawn at approximately 2100 (9 P.M.) on the first day of the test for a pre-dexamethasone cortisol level. At bedtime the patient is given 1.0 mg of dexamethasone and a sedative orally, per physician's orders. Patient's sleep should not be interrupted during the night. On the second day of the test, the patient is drawn fasting for a postdexamethasone cortisol level. Patient may eat after sample is drawn. Date and Time of Dose are required.



**Cortisol, Pre-Dexamethasone****Panel Code: PDX****CPT Codes(s):** 82533**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green / OP Red (9 P.M.)

SUBMIT: 1 mL serum REFRIGERATED.

NOTE: Patient is drawn at approximately 2100 (9 P.M.) on the first day of the test for a pre-dexamethasone cortisol level. At bedtime the patient is given 1.0 mg of dexamethasone and a sedative orally, per physician's orders. Patient's sleep should not be interrupted during the night. On the second day of the test, the patient is drawn fasting for a postdexamethasone cortisol level. Patient may eat after sample is drawn. Date and Time of Dose are required.

**Cortisol, Saliva****Panel Code: SLC****CPT Codes(s):** 82533**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Salivette®

SUBMIT: Saliva collected in a Salivette® REFRIGERATED.

UNACCEPTABLE: Specimens not collected using the Salivette® collection device. Sodium azide preservative. Specimens with pH values greater than 9.0 or less than 3.5 must be recollected. Specimens visibly contaminated with blood, cellular debris, food particles, or mucus.

NOTE: Do not collect specimen within 60 minutes after eating a meal, within 12 hours after consuming alcohol, immediately after brushing teeth or after any activity that may cause gums to bleed. Rinse mouth thoroughly with water 10 minutes before specimen collection. Recommended collection time is between 11:00 p.m. - 1:00 a.m. Remove cap, tip swab into mouth. Do NOT touch swab with fingers. Roll swab in mouth to completely saturate the swab to ensure sufficient volume for testing. Place swab back into container without touching with fingers. Date and Time of Collection are REQUIRED. Bovine hormones normally present in dairy products can cross-react with anti-cortisol antibodies and cause false results. Acidic or high sugar foods can compromise assay performance by lowering sample pH and influence bacterial growth.





**Cosyntropin Stimulation****Panel Code: SAC****CPT Codes(s):** 80400, 82533**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green top/OP Red Top

SUBMIT: 1 mL serum REFRIGERATED, each collection in a separate tube.

NOTE: 1. Blood is drawn for a pre-dose cortisol level within 1 hour of giving injection. 2. Give 0.25 mg of dose cortrosyn. Dose is IM or IV per physician orders. Exact dose time required. 3. Post-dose cortisol levels are drawn 30 AND 60 minutes after the cortrosyn injection. LABEL SPECIMENS WITH EXACT TIME OF DRAW.

**Coxsackie A Antibodies (Serotypes 2, 4, 7, 9, 10 and 16), Serum****Panel Code: CXA****CPT Codes(s):** 86658x6**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum ROOM TEMPERATURE. Minimum volume 1 mL.

NOTE: Specimen stable Ambient 1 week, Refrigerated 2 weeks, Frozen 1 month.

**Coxsackie B Virus Antibodies****Panel Code: CXB**

Coxsackie B Types 1,2,3,4,5 and 6

**CPT Codes(s):** 86658 x6**Test Performed at:** ARUP LABS**Analytic Time:** 216 hours (9 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: CSF or Plasma. Contaminated, hemolyzed, or severely lipemic specimens.

NOTE: Specimen source required. Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens. Mark specimens plainly as "acute" or "convalescent." Single positive antibody titers of greater than or equal to 1:80 may indicate past or current infection. Seroconversion or an increase in titers between acute and convalescent sera of at least fourfold is considered strong evidence of current or recent infection.



**C-peptide****Panel Code: CPT**

**CPT Codes(s):** 84681  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** Red Top (Fasting)  
**SUBMIT:** 0.5 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Collected in EDTA or sodium fluoride. Samples not separated from cells within 2 hours of collection.  
**NOTE:** Fasting recommended. Fasting Reference Range is reported. Alternate specimen: Plasma from Green Top (lithium or sodium heparin).

**C-Reactive Protein****Panel Code: CRP**

**CPT Codes(s):** 86140  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED. Pediatric minimum volume is 110 uL.

**C-Reactive Protein, High Sensitivity (hs-CRP)****Panel Code: CHS**

**CPT Codes(s):** 86141  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED.  
**NOTE:** This test is recommended for cardiovascular risk assessment only.

**Creatinine****Panel Code: CRE**

Glomerular Filtration Rate, estimated (eGFR)

**CPT Codes(s):** 82565  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top / OP Lithium Heparin  
**SUBMIT:** 1 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Markedly hemolyzed specimen.



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**Creatinine Clearance****Panel Code: CCL**

Creatinine Clearance Calculation  
Creatinine, Serum  
Creatinine, Urine  
Glomerular Filtration Rate, estimated (eGFR)

**CPT Codes(s):** 82575

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:**

Days Test Performed: All

**Specimen:**

COLLECT: 24 Hr Urine (No Preservative) and Red Top

SUBMIT: 10 mL aliquot of 24 hr urine collection (no preservative) REFRIGERATED and 1 mL serum REFRIGERATED.

NOTE: Total volume (mL) and patient's height and weight are REQUIRED. Blood should be drawn within 48 hours of urine collection. See the Specimen Collection section of this manual for collection instructions and acceptable preservatives.

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**Creatinine, 24 Hour Urine****Panel Code: CRU**

\*\* AVAILABILITY: HML Client Reference Lab Only \*\*

**CPT Codes(s):** 82570

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

Days Test Performed: All

**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and acceptable preservatives. The CRU panel is not orderable for hospital inpatients.

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**Creatinine, Random Urine****Panel Code: UCR**

**CPT Codes(s):** 82570

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

Days Test Performed: All

**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.

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**Creatinine, Timed Urine (Non-24Hr)****Panel Code: TCR****\*\* AVAILABILITY: HML Client Reference Lab Only \*\*****CPT Codes(s):** 82570**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Timed Urine (No Preservative)

SUBMIT: 10 mL aliquot of Timed Urine (Non-24 Hr) Collection (no preservative)

UNACCEPTABLE: 24 Hour Urine Collections.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and acceptable preservatives.

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**CRMP-5-IgG Western Blot****Panel Code: CRM****CPT Codes(s):** 84182**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 240 hours (10 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 3 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimen.

NOTE: It is recommended that Paraneoplastic Autoantibody Evaluation be ordered in conjunction with this test if not previously performed. Western blot analysis is indicated when interfering nonorgan-specific or coexisting neuron-specific autoantibodies preclude unambiguous detection of CRMP-5-IgG, by indirect immunofluorescence assay, or when the immunofluorescence assay is negative in a patient whose neurological presentation suggests a CRMP-5-IgG-related syndrome.

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**Cryoglobulin Identification****Panel Code: LAB3209****CPT Codes(s):** 86334**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: 2- 10mL Red @37C

NOTE: Reflex only-performed on positive cryoglobulin specimens only when requested.



**Cryoglobulin, Quantitative****Panel Code: CYG**

**CPT Codes(s):** 82585, 82595  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** 2-10mL Red @ 37c  
**SUBMIT:** 6 mL serum REFRIGERATED. Minimum volume 3 mL.  
**UNACCEPTABLE:** Not maintained at 37°C prior to processing. Markedly hemolyzed. Sample has been frozen. SST® tube collected. Less than 3 mL of serum received.  
**NOTE:** Patient fasting 8 hours. Incubate at 37°C for 1 hour. Centrifuge at 37°C (10 minutes at 3000 RPM). Transfer serum to 15 mL conical polystyrene tube and centrifuge again at 37°C (5 minutes) to remove unseen RBCs. Aliquot serum into a second 15 mL conical polystyrene tube and store in refrigerator.

**Cryptococcal Antigen Cascade****Panel Code: LAB3068**

**CPT Codes(s):** 86403  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 2 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Spinal Fluid Screw-Top OR Plain Red Top  
**SUBMIT:** 0.2 mL CSF OR 1.0 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Specimen collected in an SST® tube. Less than 0.1 mL specimen.  
**NOTE:** If screen is positive, a titer will be performed and charged separately using CPT code 86406.

**Cryptosporidium Detection, Stool****Panel Code: CRY**

**CPT Codes(s):** 87015, 87272  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 8 hours  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Protifix™  
**SUBMIT:** Walnut-sized portion of stool or 5.0 mL liquid stool in Protifix™ REFRIGERATED or ROOM TEMPERATURE OR walnut-sized portion of stool or 5.0 mL liquid stool in a clean screw-top container REFRIGERATED.  
**UNACCEPTABLE:** Preserved stool more than 1 week old. Specimen in culture medium. Unpreserved stool more than 48 hours old.  
**NOTE:** Positive results will be reported to MDH. This test also detects Giardia cysts. HML will notify the client and request an order for the result.



**Cryptosporidium/Giardia Combo, Stool****Panel Code: CGC****CPT Codes(s):** 87015, 87269, 87272**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Protifix™

SUBMIT: Walnut-sized portion of stool or 5.0 mL liquid stool in Protifix™ REFRIGERATED OR walnut-sized portion of stool of 5.0 mL liquid stool in a clean screw-top container REFRIGERATED.

UNACCEPTABLE: Preserved stool more than 1 week old. Specimen in culture medium.  
Unpreserved stool more than 48 hours old.

NOTE: Positives will be reported to MDH.

**Crystals, Body Fluid****Panel Code: JFC****CPT Codes(s):** 89060**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top (no additive), Sterile Container

SUBMIT: 1 mL of synovial fluid REFRIGERATED. Specimen must arrive within 24 hours of collection.

UNACCEPTABLE: Volumes less than 0.5 mL. Sodium Heparin tubes, Lithium Heparin tubes, or Gel tubes.

NOTE: Specimen source is REQUIRED.

**CSF Exam, HML****Panel Code: CSE**

CSF, Exam (Cell count)

Glucose, CSF

Protein, CSF

**CPT Codes(s):** 82945, 84157, 89050**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 4 mL spinal fluid ROOM TEMP: REFRIGERATED if not received within 2 hours of collection.

NOTE: Clearly label which tests to perform on particular tubes. If WBC is greater than 5 cells/uL a differential will be performed and CPT code 89051, which carries a higher charge, will be substituted for the original 89050 CPT code.



**CSF, Cell Count****Panel Code: CSF****CPT Codes(s):** 89050**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 1 mL spinal fluid ROOM TEMP; REFRIGERATED if not received within 2 hours of collection.

**CSF, Differential****Panel Code: CDF****CPT Codes(s):** 89051**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 1 mL spinal fluid ROOM TEMP; REFRIGERATED if not received within 2 hours of collection.

**C-Telopeptide, Beta-Cross-Linked, Serum****Panel Code: CTX****CPT Codes(s):** 82523**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Tue Thu Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: For patients receiving therapy with high biotin doses (e.g. greater than 5 mg/day), specimen should not be drawn until at least 8 hours after the last biotin administration. Allow serum separator tube to sit for 15-20 minutes at room temperature for proper clot formation. Alternate specimen: Plasma from Green Top (lithium heparin).



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**Culture and Gram Stain, Drainage****Panel Code: DRG****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:****COLLECT:** Needleless Syringe or CultureSwab™**SUBMIT:** Drainage material in needleless, capped syringe, sterile screw-top or swab of material in CultureSwab™.**UNACCEPTABLE:** Dry swab. Specimen older than 24 hours.**NOTE:** Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Culture and Gram Stain, Surgical Site****Panel Code: ASW****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Eswab transport**SUBMIT:** Swab in Eswab transport REFRIGERATED.**UNACCEPTABLE:** Dry swab. Specimen older than 24 hours.**NOTE:** Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Culture and Stain, AFB, Respiratory Specimen****Panel Code: RTB****CPT Codes(s):** 87015, 87116, 87206**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1008 hours (42 days)**Days Test Performed:** All**Specimen:****COLLECT:** Sterile Screw-Top Container**SUBMIT:** 3 sputum specimens (2-10 mL each) obtained 8-24 hours apart OR bronch wash or lavage in a sterile screw-top container REFRIGERATED.**UNACCEPTABLE:** Less than 2.0 mL specimen. Multiple sputum specimens collected less than 8 hours apart. Specimen older than 96 hours.**NOTE:** See the Specimen Collection section of this manual for collection instructions. Sputum specimens are best collected prior to eating as single, FIRST MORNING deep cough collection. Organisms grown on culture will be charged separately using CPT code 87118. This test includes an acid fast (AFB) stain.



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**Culture, AFB Urine****Panel Code: UTB****CPT Codes(s):** 87015, 87116**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1008 hours (42 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 50 mL of a first-morning urine in a sterile screw-top container REFRIGERATED.

UNACCEPTABLE: Specimen older than 96 hours.

NOTE: If an AFB stain is ordered, request panel AFB (AFB stain). Organisms grown on culture will be charged separately using CPT code 87118.

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**Culture, AFB, Blood/Bone Marrow****Panel Code: BTB****CPT Codes(s):** 87116**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1008 hours (42 days)**Days Test Performed:** All**Specimen:**

COLLECT: MYCO/F Bottle

SUBMIT: 5.0 mL blood in a MYCO/F bottle ROOM TEMP.

NOTE: See the Specimen Collection section of this manual for collection instructions for blood cultures. Organisms grown on culture will be charged separately using CPT code 87118

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**Culture, AFB, Body Fluid/Tissue****Panel Code: OTB****CPT Codes(s):** 87015, 87116**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1008 hours (42 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 2-10 mL fluid in sterile screw-top, needleless capped syringe, A.C.T. ® 1 or green top tube OR tissue in a sterile screw-top container REFRIGERATED. Swab.

UNACCEPTABLE: Specimen older than 96 hours. Specimen in formalin.

NOTE: If an AFB smear is ordered, request panel AFB (AFB stain). Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87118



**Culture, Anaerobic****Panel Code: CAN****CPT Codes(s):** 87075**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Eswab transport or A.C.T. ® 1

SUBMIT: In Eswab transport OR fluid in A.C.T. ® 1, green top tube, or in a needleless capped syringe with air expelled, OR tissue in sterile screwtop container at ROOM TEMP received within 24 hours of collection.

UNACCEPTABLE: CultureSwab™. Cervical, sputum, or vaginal specimens. Specimens older than 24 hours. NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87076 for each organism reported."

**Culture, Blood****Panel Code: LABXXXX****CPT Codes(s):** 87040**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 144 hours (6 days)**Days Test Performed:** All**Specimen:**

COLLECT: Blood Culture Bottles, Aerobic, Anaerobic

SUBMIT: Blood collected in blood culture bottles ROOM TEMP.

UNACCEPTABLE: Clotted specimen. Vacutainer collected specimen. Less than 7 mL blood on an adult.

NOTE: See the Specimen Collection section of this manual for collection instructions.

Collection site is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87076 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel.

**Culture, Blood Pediatric****Panel Code: LAB3110****CPT Codes(s):** 87040**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: Blood Culture Bottle, Pediatric

SUBMIT: Blood collected in blood culture bottle ROOM TEMP.

UNACCEPTABLE: Clotted specimen. Vacutainer collected specimen. Less than 1.0 mL of blood.

NOTE: See the Specimen Collection section of this manual for collection instructions.

Collection site is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel.



**Culture, Bone Marrow****Panel Code: BMC****CPT Codes(s):** 87040**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: PEDS/PLUS F Blood Culture Bottle

SUBMIT: 1-2 mL bone marrow in PEDS/PLUS F blood culture bottle OR 1-2 mL bone marrow in green top tube at ROOM TEMP.

NOTE: Disinfect rubber septum of bottle with 70% alcohol before injecting specimen.

Organisms grown on culture will be charged separately using CPT code 87077 or 87076 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture, Catheter Tip****Panel Code: CTC****CPT Codes(s):** 87071**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top

SUBMIT: Last 2 inches of catheter in sterile screw-top container REFRIGERATED.

UNACCEPTABLE: Foley Cath tip, specimen &gt; 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture, Cornea****Panel Code: COR****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Port-a-Cul Tube™

SUBMIT: Cornea rim in E swab tube ROOM TEMP or scrapings collected at bedside and inoculated directly on culture media obtained from Microbiology ROOM TEMP.

UNACCEPTABLE: Specimen older than 24 hours.

NOTE: Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.



**Culture, CSF****Panel Code: SPI****CPT Codes(s):** 87015, 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:****COLLECT:** Spinal Fluid in CSF Collection Tube**SUBMIT:** 0.5 mL CSF, ROOM TEMP up to 2 hours.**NOTE:** Gram stain must be ordered separately. Order panel GRS. If gram stain not ordered, lab will order and charge separately. Indicate on requisition if specimen is from a tap or from a shunt. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.**Culture, Drainage****Panel Code: DG****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:****COLLECT:** Needleless Syringe or CultureSwab™**SUBMIT:** Drainage material in needleless, capped syringe, sterile screw-top or swab of material in CultureSwab™.**UNACCEPTABLE:** Dry swab. Specimen older than 24 hours.**NOTE:** Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.**Culture, Ear****Panel Code: EAR****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:****COLLECT:** Needleless Syringe, CultureSwab™ or Mini-Tip Eswabs**SUBMIT:** Drainage material in needleless, capped syringe, sterile screw-top, mini-tip Eswab or swab of material in CultureSwab™.**UNACCEPTABLE:** Dry swab. Specimen older than 72 hours.**NOTE:** Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Culture, Eye****Panel Code: EYE****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: MiniTip ESwab

SUBMIT: MiniTip ESwab

UNACCEPTABLE: Dry swab. Specimen older than 12 hours.

NOTE: Moisten swab with sterile saline before collection. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

\* For cornea scrapings or cornea rims, order Cornea Culture (COR).

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**Culture, Fungus (CSF)****Panel Code: FSF****CPT Codes(s):** 87102**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 0.5 mL CSF ROOM TEMP.

NOTE: Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.

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**Culture, Fungus, Blood/Bone Marrow****Panel Code: BFU****CPT Codes(s):** 87103**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**Days Test Performed:** All**Specimen:**

COLLECT: MYCO/F Bottle

SUBMIT: 5.0 mL blood in MYCO/F bottle ROOM TEMP.

NOTE: See the Specimen Collection section of this manual for collection instructions for blood cultures. Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.

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**Culture, Fungus, Dermal****Panel Code: FUD****CPT Codes(s):** 87101**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container or Culture Swab™

SUBMIT: Hair clippings, nail bed scrapings, skin scrapings in a sterile screw-top container or a swab of a rash/wound in a Culture Swab™ ROOM TEMP or REFRIGERATED.

UNACCEPTABLE: Dry swab.

NOTE: If KOH prep is ordered, request panel KOH (KOH Prep). Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.

**Culture, Fungus, Fluid/Tissue****Panel Code: FFT****CPT Codes(s):** 87102**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**DAYS TEST PERFORMED:** ALL**Specimen:**

COLLECT: Sterile Screw-top Container

SUBMIT: Fluid in A.C.T. ® 1, needleless capped syringe, or sterile screw-top container OR tissue in sterile screw-top container ROOM TEMP.

NOTE: Specimen source is REQUIRED. If KOH is ordered, request panel KOH (KOH Prep). Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.

**Culture, Fungus, Respiratory****Panel Code: FRE****CPT Codes(s):** 87102**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 2 mL first morning sputum in sterile screw-top container REFRIGERATED. Bronch wash or BAL in sterile screw-top container. Sinus specimen on culture swab.

NOTE: See the Specimen Collection section of this manual for collection instructions. If KOH prep is ordered, request panel KOH (KOH Prep). Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.



**Culture, Fungus; Misc - Ear, Eye, Mouth, or Vaginal****Panel Code: FUM****CPT Codes(s):** 87102**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 168 hours (7 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED, stool in clean screw top container.

UNACCEPTABLE: Specimen older than 24 hours. Dry swab.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87106 or 87107 for each organism reported.

**Culture, Genital****Panel Code: VCU****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™ - White Eswab

SUBMIT: Swab in Charcoal media &lt;6 hours old or Eswab transport media &lt;24 hours old, OR body fluid in sterile screw-top container &lt;6 hours old. ROOM TEMP or REFRIGERATED.

UNACCEPTABLE: Eswab specimens &gt;24 hours old. Body fluid specimens &gt;6 hours old. Calcium alginate or cotton swabs. Dry swabs.

NOTE: Specimen source is REQUIRED. Culture should not be used for diagnosis of bacterial vaginosis. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each isolate reported. Susceptibility testing performed on reported organisms will be charged separately using 87186 for each susceptibility panel reported. Requests for Neisseria gonorrhoeae (GC) should be collected/ordered separately.

**Culture, Gram Stain: Body Fluid****Panel Code: BFC****CPT Codes(s):** 87015, 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-top Container or Needleless capped syringe

SUBMIT: 0.1 mL or more of fluid in A.C.T. ® 1, needleless capped syringe, green top tube, or sterile screw-top container at ROOM TEMP. Greater than 1 mL sample preferred. Less than that may compromise culture results.

UNACCEPTABLE: Specimen older than 12 hours. NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.



**Culture, Group A; Vaginal or Rectal****Panel Code: GRA****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED.

UNACCEPTABLE: Dry swab older than 2 hours. CultureSwab™ older than 72 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077. If a susceptibility test is performed it will be charged separately using CPT code 87186.

**Culture, Legionella****Panel Code: LPC****CPT Codes(s):** 87081**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 240 hours (10 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Bronchial washing, bronchoalveolar lavage, bronchus fluid, chest fluid, chest tube drainage, empyema, endotracheal specimen, fresh lung tissue, heart valves, induced sputum, lingula (lung), lung biopsy, pericardial fluid or tissue, pleura, pleural fluid, protected catheter brush, sputum, thoracentesis fluid, tracheal secretion, transbronchial biopsy, or transtracheal aspirate REFRIGERATED.

UNACCEPTABLE: Frozen specimen.

NOTE: Specimen source is required. Organisms grown on culture will be charged separately using CPT code 87077 or 87153 or 87176.

**Culture, Mouth****Panel Code: MOU****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Do not order Yeast Culture separately-Mouth Cultures are always cultured for yeast. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported.





**Culture, MRSA (ID Only)****Panel Code: MRS****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ OR sputum or urine in sterile screw-top container  
REFRIGERATED.

UNACCEPTABLE: Dry swab. Specimen older than 48 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibilities are not performed unless specifically requested.

**Culture, Neisseria gonorrhoeae****Panel Code: GC****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™ - White Eswab

SUBMIT: Swab from cervix, urethra, anus or throat in Charcoal media &lt;6 hours old or Eswab transport media &lt;24 hours old, OR body fluid in sterile screw-top container &lt;6

UNACCEPTABLE: Eswab specimens &gt;24 hours old. Body fluid specimens &gt;6 hours old.

Calcium alginate or cotton swabs. Dry swabs.

NOTE: An MDH STD Case Report form will be forwarded to client for completion for all positive cultures. Organisms grown on culture will be charged separately using CPT code 87077.

**Culture, Nocardia/Actinomyces****Panel Code: NOC****CPT Codes(s):** 87070, 87075**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 504 hours (21 days)**Days Test Performed:** All**Specimen:**

COLLECT: Eswab transport or sterile screw-top

SUBMIT: Swab in Eswab transport OR fluid in A.C.T. ® 1 OR bronch specimen in sterile screw-top container OR tissue in sterile screw-top container ROOM TEMP up to 12 hours.

UNACCEPTABLE: Swab in CultureSwab™. Specimen older than 12 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87076 or 87077.



**Culture, Nose****Panel Code: NOS****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED up to 72 hours.

UNACCEPTABLE: Dry swab.

NOTE: Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture, Pelvic Cavity****Panel Code: PEL****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ OR specimen in sterile screw-top (Fluid in A.C.T. ® 1 or needleless, capped syringe). ROOM TEMP up to 12 hours.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. This panel is to be ordered on specimens from cul-de-sac, placenta, endometrium, IUD, NOT vaginal or cervical sites. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture, Screen for Staph Only****Panel Code: CSS****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED.

UNACCEPTABLE: Dry swab older than 2 hours. CultureSwab™ older than 72 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing not performed unless specifically requested.



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**Culture, Semen****Panel Code: SEM****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Specimen in sterile screw-top container ROOM TEMP up to 4 hours.

UNACCEPTABLE: Specimen older than 24 hours. Dried specimen.

NOTE: Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Culture, Sinus****Panel Code: SIN****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED.

UNACCEPTABLE: Dry swab. Swab from nares or NP swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged using CPT code 87186 for each susceptibility panel reported.



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**Culture, Stool****Panel Code: LAB2509**

Campylobacter  
Salmonella  
Shiga toxin producing Ecoli 0157 (EHEC)  
Shigella  
Yersinia

**CPT Codes(s):** 87045, 87046 x2

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Carey-Blair Media

**SUBMIT:** Walnut-sized portion of stool in Cary-Blair media, ROOM TEMP < 72 hrs, OR  
pea-sized portion of stool in clean screw-top container ROOM TEMP, up to 2 hours.

**NOTE:** EHEC cannot be performed on a rectal swab. Specimens from hospitalized patients are not acceptable after the 3rd day. All specimens tested for Salm, Shig, Yers, Camp and Shiga-toxin producing Ecoli 0157. Enteric pathogens will be reported to MDH.

Organisms grown on culture will be charged separately using CPT 87077. Susceptibility testing will be performed /charged separately on Shig and Yers - CPT 87186.

\* The EHEC assay will not be performed on gram negative (GN) broths that do not exhibit growth after incubation period. An EHEC test will only reflex if broth exhibits growth.

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**Culture, Throat****Panel Code: TC**

**CPT Codes(s):** 87070

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** CultureSwab™

**SUBMIT:** Throat swab in CultureSwab™ REFRIGERATED.

**UNACCEPTABLE:** Dry swab older than 2 hours. CultureSwab™ older than 72 hours refrigerated.

**NOTE:** See the Specimen Collection section of this manual for collection instructions.

Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. This test should be ordered when submitting throat culture plates.



**Culture, Throat, Diphtheria****Panel Code: DIP****CPT Codes(s):** 87081**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Throat or NP swab in CultureSwab™ ROOM TEMP.

UNACCEPTABLE: Frozen specimen.

NOTE: Specimen source is REQUIRED. Indicate "Looking for C. diphtheria" when placing order. Positives will be reported to MDH. Organisms grown on culture will be charged separately using CPT code 87077 or 87153.

**Culture, Urine****Panel Code: UC****CPT Codes(s):** 87086**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top OR Boricon Container

SUBMIT: 1.0 mL urine in sterile screw-top container REFRIGERATED OR 20 mL urine in boricon container ROOM TEMP or REFRIGERATED.

UNACCEPTABLE: Unpreserved-more than 24 hours refrigerated or 4 hours room temp. Preserved-older than 48 hours.

NOTE: See the Specimen Collection section of this manual for collection instructions. Indicate midstream, straight cath, foley, or bagged when placing order. Organisms grown on culture will be charged separately using CPT 87088 or 87106 for each non-Ecoli isolate. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture, Urine Plates Referred for ID/Susceptibility****Panel Code: CFW****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Culture Plate

SUBMIT: Actively growing organism on culture media at ROOM TEMP.

NOTE: Specimen source is REQUIRED. Only for urine culture plates. If ""SENSITIVITY ONLY"" is requested, organism identification must be provided on requisition &amp; sensitivity will be charged separately. If ""IDENTIFICATION ONLY"" is requested, identification will be charged. If ""IDENTIFICATION &amp; SENSITIVITY"" are requested, both will be charged. Use CPT code 87088 for each non-Ecoli isolate, or 87106 for each yeast isolate reported, &amp; CPT code 87186 for each susceptibility panel reported. For throat culture plates, order TC.



**Culture, Viral, Non-Respiratory****Panel Code: VCN****CPT Codes(s):** 87252**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 336 hours (14 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 1.0 mL body fluid or CSF in sterile screw-top container OR rectal swab in m5 media OR 5-10 grams of stool in sterile screw-top container OR non-lung tissue in sterile saline of M5 REFRIGERATED.

UNACCEPTABLE: Blood, bone marrow, genital or dermal, oral, synovial fluid, lymph node, urine or abscess specimens. Wood or gel swab.

NOTE: Specimen source is REQUIRED. Rapid Herpes or Cytomegalovirus performed on request. The following CPT's may be charged separately if appropriate - 87176 (tiss proc), 87253 (add'l IDs), 87254 (viral smear, shell vial).

**Culture, VRE****Panel Code: VRE****CPT Codes(s):** 87081**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Stool in sterile screw-top container OR swab in CultureSwab™ REFRIGERATED.  
Urine in sterile container, swab from clinical site.

UNACCEPTABLE: Dry swab. Specimen older than 48 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported.

**Culture, Wound****Panel Code: WD****CPT Codes(s):** 87070**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Eswab, CultureSwab™

SUBMIT: Drainage material in on swab of material in CultureSwab™.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.



**Culture, Yeast****Panel Code: YEC****CPT Codes(s):** 87102**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87106 for each organism reported.

**Culture/Gram Mini-BAL****Panel Code: VAP****CPT Codes(s):** 87071, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile screw-top container

SUBMIT: Mini-BAL in sterile screw-top container REFRIGERATED.

UNACCEPTABLE: Specimen older than 24 hours.

NOTE: Organisms growing on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organism will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture/Gram Stain: Aspirate****Panel Code: ASC****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: A.C.T. ® 1

SUBMIT: Aspirated specimen in an A.C.T. ® 1, needleless capped syringe, or a sterile screw-top container at ROOM TEMP.

UNACCEPTABLE: Specimen older than 12 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87076 for each organism reported. Susceptibility testing performed on reported isolates will be charged separately using CPT code 87186 for each susceptibility panel reported.



**Culture/Gram Stain: Bronchial****Panel Code: BRO****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Wash or lavage in sterile screw-top container OR brush in sterile saline  
REFRIGERATED.

UNACCEPTABLE: Specimen older than 24 hours.

NOTE: Organisms grown on culture will be charged separately using CPT code 87077 or 87106 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture/Gram Stain: Joint****Panel Code: JOI****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in Culture Swab™ OR ESwab REFRIGERATED.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 or 87076 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

**Culture/Gram Stain: Sputum****Panel Code: SPU****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Expecterated or induced sputum OR trach aspirate in sterile screw-top container  
REFRIGERATED.

UNACCEPTABLE: Sputum with &gt;10 epithelial cells/LPF or older than 24 hours.

NOTE: See the Specimen Collection section for collection instructions. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.





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**Culture/Gram Stain: Tissue****Panel Code: TIS****CPT Codes(s):** 87070, 87176, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Tissue in sterile screw-top container REFRIGERATED.

UNACCEPTABLE: Specimen in formalin.

NOTE: Specimen source is REQUIRED. Specimen must be received in lab within 4 hours if anaerobic culture is ordered. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Culture/Gram Stain: Wound****Panel Code: WND****CPT Codes(s):** 87070, 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Drainage material on swab of material in CultureSwab™.

UNACCEPTABLE: Dry swab. Specimen older than 24 hours.

NOTE: Specimen source is REQUIRED. Organisms grown on culture will be charged separately using CPT code 87077 for each organism reported. Susceptibility testing performed on reported organisms will be charged separately using CPT code 87186 for each susceptibility panel reported.

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**Cyclosporine (Sandimmune®)****Panel Code: CYC****CPT Codes(s):** 80158**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top-Whole Bld

SUBMIT: 2 mL whole blood REFRIGERATED. Minimum volume 0.4 mL.

UNACCEPTABLE: Collection in gel container; clotted specimen.

NOTE: Usual collection time is immediately prior to next dose. Alternate specimen: Green Top (lithium or sodium heparin) whole blood.



**Cystic Fibrosis (CFTR) 165 Pathogenic Variants****Panel Code: LAB3034****CPT Codes(s):** 81220**Test Performed at:** ARUP LABS**Analytic Time:** 240 hours (10 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Lavender Top - Whole Blood

SUBMIT: 4 mL whole blood REFRIGERATED. Minimum volume 1 mL.

UNACCEPTABLE: Plasma or serum. Specimens collected in sodium heparin or lithium heparin tubes.

NOTE: Use: Carrier screening for expectant individuals and those planning a pregnancy AND diagnostic testing for individuals with symptoms of classic CF. The CF 165-Variants assay includes the 23 pathogenic CF variants recommended by the American College of Medical Genetics for population carrier screening. Specimen is stable at Room Temperature 72 hours, Refrigerated 2 weeks.

**Cytochrome P450 2C19 Genotype, Blood****Panel Code: LAB3013****CPT Codes(s):** 81225**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender Top - Whole Blood

SUBMIT: 3 mL whole blood ROOM TEMPERATURE.

UNACCEPTABLE: Clotted specimen, patient transfused in the last 4-6 weeks, or has received a bone marrow or liver transplant.

NOTE: This test is designed to detect a specific set of CYP2C19 variants (\*2, \*3, \*4, \*5, \*6, \*7, \*8, \*9, \*10 and \*17). Other star alleles cannot be detected by this assay.

**Cytochrome P450 2C9 Genotype****Panel Code: LAB3012****CPT Codes(s):** 81227**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 240 hours (10 days)**Days test performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender Top - Whole Blood

SUBMIT: 3 mL whole blood ROOM TEMPERATURE.

UNACCEPTABLE: Clotted specimen, patient transfused in the last 4-6 weeks, or has received a bone marrow or liver transplant.



**Cytochrome P450 2D6 Comprehensive Cascade,  
Blood****Panel Code: 2D6****CPT Codes(s):** No CPTs**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 384 hours (16 days)**Days Test Performed:** Mon Thu**Specimen:**

COLLECT: Lavender Top - Whole Blood

SUBMIT: 3 mL whole blood ROOM TEMPERATURE.

UNACCEPTABLE: Clotted specimen, patient transfused in the last 4-6 weeks, or has received bone marrow or liver transplant.

NOTE: This test is intended for the assessment of patients receiving meds for the treatment of depression and other psychiatric disorders. Panel 2D6 will always include CYP2D6 genotype testing. If needed reflex testing will be performed which may include any of the following: CYP2D6 Copy Number Variation; Full Gene Sequencing; 2D7 Gene Sequencing; 2D6 Gene Sequencing; CYP2D6 Duplication Sequence A, B; Duplication Sequence B, B; Duplication Sequence C, B (CPT 81479) at additional charge.

**Cytomegalovirus (CMV) Antibody, IgG****Panel Code: CMV****CPT Codes(s):** 86644**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). For CMV IgG &amp; IgM Panel, also order LAB3135 CMV IgM.

**Cytomegalovirus (CMV) Antibody, IgM****Panel Code: LAB3135****CPT Codes(s):** 86645**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL.

UNACCEPTABLE: Gross hemolysis.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). For CMV IgG &amp; IgM Panel, also order LAB1331 CMV IgG.



**Cytomegalovirus by Qualitative PCR****Panel Code: CVP****CPT Codes(s):** 87496**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Sterile Screw-Top Container**SUBMIT:** 1 mL amniotic fluid, bronchoalveolar lavage (BAL), CSF, ocular fluid, or urine in a sterile screw-top container FROZEN. Minimum volume 0.5 mL.**UNACCEPTABLE:** Heparinized specimens.**NOTE:** Specimen source is REQUIRED. Specimen stable Room Temperature 8 hours, Refrigerated 72 hours, Frozen 3 months. Alternate specimen: Tissue in a sterile container FROZEN. Tissue specimen stable Frozen 3 months. Room Temperature and Refrigerated is unacceptable for tissue.**Cytomegalovirus DNA by PCR, Quantitative,  
Plasma, Urine and Bronchial Lavage****Panel Code: CVQ****CPT Codes(s):** 87497**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:****COLLECT:** Plasma(LAV) or UR or BAL in sterile screw-top tube**SUBMIT:** 2 mL EDTA plasma FROZEN. Minimum volume 1 mL. Centrifuge and aliquot within 6 hours of collection.**UNACCEPTABLE:** Specimens other than EDTA plasma, bronchial lavage or urine. Urine with preservative added.**NOTE:** Specimen source is REQUIRED. Specimen stable Refrigerated up to 7 days, Freeze if >7 days. Alternate specimen: 1 mL urine or bronchial lavage (BAL). Do not centrifuge urine or bronchial specimens. Minimum volume 0.8 mL. Minimum volume of 0.25 mL plasma is acceptable for children 3 years of age or younger only. This volume does not permit repeat analysis and will be reported with the following: This sample was diluted 1:1 with a phosphate buffered saline solution to achieve the minimum volume for testing. Result reported should be interpreted with caution. Very low levels of CMV may not be detected.

**D-dimer, Quantitative****Panel Code: DDI****CPT Codes(s):** 85379**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top**SUBMIT:** 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, or marked hemolysis, clotted specimen, whole blood received >4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** See Specimen Collection section of this manual for preparation of platelet-free plasma.**Dehydroepiandrosterone Sulfate, Serum****Panel Code: DES****CPT Codes(s):** 82627**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:****COLLECT:** Red Top**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.**UNACCEPTABLE:** Hemolyzed specimens.**NOTE:** After separation from cells, specimen stable Refrigerated up to 48 hours, Frozen 2 months. Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). Allow specimen to clot completely at room temperature.**Dehydroepiandrosterone, Serum or Plasma****Panel Code: DEA****CPT Codes(s):** 82626**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:****COLLECT:** 6-10 AM Red Top**SUBMIT:** 1.0 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.**NOTE:** Collect between 6-10 a.m. Alternate specimen: Plasma from Lavender Top (EDTA) or Green Top (lithium or sodium heparin). Specimen stable Refrigerated 1 week, Frozen 6 months.

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**Desipramine Level (Norpramin®)****Panel Code: LAB3044****CPT Codes(s):** 80335**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Centrifuge and separate serum from cells within 2 hours of draw.

UNACCEPTABLE: Specimen drawn in an SST® tube. Markedly hemolyzed or lipemic or icteric specimen.

NOTE: Recommended collection is 12 hours post dose (trough).

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**Digoxin (Lanoxin®)****Panel Code: DIG****CPT Codes(s):** 80162**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 48 hours. May require ABN form.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Patient must not have taken digoxin for AT LEAST SIX TO EIGHT HOURS.

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**Diphtheria Antibody****Panel Code: LAB3022****CPT Codes(s):** 86648**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 168 hours (7 days)**Days Test Performed:** once/week**Specimen:**

COLLECT: Red Top

SUBMIT: 0.6 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Grossly lipemic, hemolyzed or icteric samples; heat-inactivated samples. Samples not separated from cells within 2 hours of collection.

NOTE: A pre-immunization and a 1-3 month post-immunization specimen are recommended. This assay is for research use only and is not approved for diagnostic purposes.



**Direct Antiglobulin Test****Panel Code: DAP**

DAT - Adult

**CPT Codes(s):** 86880**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED on patient &gt; 4 months old; minimum volume 0.5 mL.

UNACCEPTABLE: Specimen collected in an SST® tube. Incompletely or incorrectly labeled specimen.

NOTE: If poly DAT is pos, IgG DAT will be reflexed unless done within last month and charged separately using CPT code 86880. If DAT on a HealthEast hospital patient transfused within the last 3 months has turned positive or significantly changed, an elution and antibody I.D. may be performed and charged separately. Elutions are not done on HML orders unless specifically requested.

**Direct Antiglobulin Test (patient < or = 4 months old)****Panel Code: DAG**

DAT - Neonate

**CPT Codes(s):** 86880**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 0.5 mL whole blood REFRIGERATED on patient no older than 4 months old.  
Minimum volume 250 uL.

UNACCEPTABLE: Specimen collected in an SST® tube. Incompletely or incorrectly labeled specimen.

**DNA DS Screen****Panel Code: DNB****CPT Codes(s):** 86225**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.



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**DNase-B Antibody****Panel Code: LAB3158****CPT Codes(s):** 86215**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Sun, Wed, Fri**Specimen:****COLLECT:** Serum separator tube**SUBMIT:** 1.0 mL serum REFRIGERATED. Minimum volume 0.50 mL. Centrifuge and aliquot within 2 hours of collection.**UNACCEPTABLE:** Plasma or severely hemolyzed specimens. Samples not separated from cells within 2 hours of collection.**Note:** DNase-B Antibody and Streptolysin O Antibody (ASO) tests are generally ordered concurrently.

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**Doxepin (Sinequan®) and Nordoxepin****Panel Code: LAB3042**

Nordoxepin

**CPT Codes(s):** 80335**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:****COLLECT:** Plain Red Top**SUBMIT:** 1 mL serum REFRIGERATED. Centrifuge and separate serum from cells within 2 hours of draw.**UNACCEPTABLE:** Specimen collected in an SST® tube, markedly hemolyzed or lipemic or icteric specimen.**NOTE:** Recommended collection is 12 hours post dose (trough).



**Drug Detection Panel, Umbilical Cord Tissue,  
Qualitative****Panel Code: LAB3151****\*\* AVAILABILITY: St. John's & Woodwinds Hospital Inpatient Only \*\*****CPT Codes(s):** No CPTs**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** ARUP Security Kit**SUBMIT:** At least 8 inches of Umbilical Cord in ARUP Security Kit for Meconium/Umbilical Drug Detection REFRIGERATED.**UNACCEPTABLE:** Cord soaking in blood or other fluid. Formalin fixed. Tissue that is obviously decomposed.**NOTE:** Drain and discard any blood by gently squeezing cord segment between thumb and forefinger once. Rinse the exterior of the cord segment with tap water, sterile water, or normal saline. Pat the cord dry and transport at least 8 inches of umbilical cord in an ARUP Security Kit for Meconium/Umbilical Drug Detection. Used to detect and document maternal drug use during approximately the last trimester of a full term birth. To test for marijuana metabolite, order Marijuana Metabolite, Umbilical Cord Tissue, Qualitative (LAB3155). If both the Drug Detection Panel & Marijuana Metabolite tests are ordered, then a minimum of an 8 inch continuous length of umbilical cord may be submitted for both tests.**Drug Screen Prescription/OTC, Serum****Panel Code: PDS****CPT Codes(s):** 80307**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** 2 Plain Red Tops**SUBMIT:** 3 mL serum REFRIGERATED (minimum volume 1.1 mL).**UNACCEPTABLE:** Specimen drawn in an SST® tube.**NOTE:** This test looks for a broad spectrum of prescription and over-the-counter (OTC) drugs.

It is designed to detect drugs that have toxic effects, as well as known antidotes or active therapies that a clinician can initiate to treat the toxic effect. The test is intended to help physicians manage an apparent overdose or intoxicated patient, or to determine if a specific set of symptoms might be due to the presence of drugs. This test is not appropriate for drugs of abuse or illicit drug testing, including benzodiazepines, opioids, barbiturates, cocaine, amphetamine type stimulants. Not intended for therapeutic compliance testing or employment-related testing. See Special Instructions for a list of drugs screened for in this panel.



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**Drug Screen Prescription/OTC, Urine****Panel Code: UDS****CPT Codes(s):** 80307**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 30 mL aliquot of random urine collection (no preservative), REFRIGERATED.

NOTE: This test looks for a broad spectrum of prescription and over-the-counter (OTC) drugs.

It is designed to detect drugs that have toxic effects, as well as known antidotes or active therapies that a clinician can initiate to treat the toxic effect. The test is intended to help physicians manage an apparent overdose or intoxicated patient, or to determine if a specific set of symptoms might be due to the presence of drugs. This test is not appropriate for drugs of abuse or illicit drug testing, including benzodiazepines, opioids, barbiturates, cocaine, amphetamine type stimulants. Not intended for therapeutic compliance testing or employment-related testing. See Special Instructions section of this manual for a list of drugs screened for in this panel.

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**Drugs of Abuse 1, Urine****Panel Code: DA1**

Amphetamines  
Barbiturates  
Benzodiazepines  
Cocaine Metabolite  
Creatinine, urine  
Opiates  
Oxycodone  
Phencyclidine (PCP)  
THC Metabolite

**CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 20 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 5 days.

NOTE: This test is not intended for medico-legal purposes. This test does NOT include alcohol, urine screen. Order test ALU if alcohol, urine screen is to be performed and charged. This test is for screening only. Confirmations are available upon request at an additional charge.

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**Drugs of Abuse 1+, Urine****Panel Code: DAM**

Amphetamines  
Barbiturates  
Benzodiazepines  
Cocaine Metabolite  
Creatinine, urine  
Methadone  
Opiates  
Oxycodone  
Phencyclidine (PCP)  
THC Metabolite

**CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 20 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 5 days.

NOTE: This test is not intended for medico-legal purposes. This test does NOT include alcohol, urine screen. Order test ALU if alcohol, urine screen is to be performed and charged.

This test is for screening only. Confirmations are available upon request at an additional charge.

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**Drugs of Abuse 2, Urine****Panel Code: DA2**

Amphetamines  
Benzodiazepines  
Cocaine Metabolite  
Creatinine, urine  
Opiates  
Phencyclidine (PCP)  
THC Metabolite

**CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 20 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 5 days.

NOTE: This test is not intended for medico-legal purposes. This test does NOT include alcohol, urine screen. Order test ALU if alcohol, urine screen is to be performed and charged.

This test is for screening only. Confirmations are available upon request at an additional charge.



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**Drugs of Abuse 3, Urine****Panel Code: DA3**

Cocaine Metabolite  
Creatinine, urine  
THC Metabolite

**CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 20 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 5 days.

NOTE: This test is not intended for medico-legal purposes. This test does NOT include alcohol, urine screen. Order test ALU if alcohol, urine screen is to be performed and charged.

This test is for screening only. Confirmations are available upon request at an additional charge.

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**Drugs of Abuse 8-Panel, Urine, Legal****Panel Code: L08**

Alcohol  
Amphetamines  
Barbiturates  
Benzodiazepines  
Cocaine  
Creatinine  
Opiates  
Phencyclidine  
THC Marijuana

**CPT Codes(s):** 80320, 80307**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Sealed with Legal/Chain of Custody Urine

SUBMIT: 20 mL aliquot of random urine collection (no preservative), sealed in a Chain of Custody container and pouch, REFRIGERATED.

UNACCEPTABLE: Unsealed collection container and/or pouch, no Chain of Custody included.



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**Drugs of Abuse-Clinic Only****Panel Code: LAB3139**

Amphetamines  
Barbiturates  
Benzodiazepines  
Cocaine Metabolite  
Creatinine, urine  
Opiates  
Oxycodone  
Phencyclidine (PCP)  
THC Metabolite

**CPT Codes(s):** No CPTs

**Test Performed at:**

**Analytic Time:** 10 minutes

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Dirty (non-clean) Catch, Random, urine

SUBMIT: 30 ml's in sterile container screw top tube.

Unacceptable: Less than 10ml's of urine.

NOTE: This test is not intended for medico-legal purposes. This test does NOT include alcohol,urine screen. Order test ALU if alcohol, urine screen is to be performed and charged. This test is for screening only. Confirmations are available upon request at an additional charge.

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**Echovirus Antibodies****Panel Code: ECO**

Echo serotypes 4,7,9,11 and 30

**CPT Codes(s):** 86658 x5

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 216 hours (9 days)

**Days Test Performed:** Tue Wed Thu Fri Sat

**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

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**Ehrlichia and Anaplasma Species by Real-Time PCR**

Panel Code: EHL

Anaplasma phagocytophilum  
Ehrlichia chaffeensis  
Ehrlichia ewingii/canis  
Ehrlichia muris-like

CPT Codes(s): 87798 x4

Test Performed at: ARUP LABS

Analytic Time: 72 hours (3 days)

Days Test Performed: All

**Specimen:**

COLLECT: Lav Top (Whole Blood)

SUBMIT: 1 mL whole blood (EDTA) REFRIGERATED. Minimum volume 0.6 mL.

UNACCEPTABLE: Serum, plasma, and heparinized specimens.

**Ehrlichia chaffeensis Antibodies, IgG & IgM by IFA**

Panel Code: EH

CPT Codes(s): 86666 x 2

Test Performed at: ARUP LABS

Analytic Time: 120 hours (5 days)

Days Test Performed: Tue Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.3 mL.

UNACCEPTABLE: Contaminated, hemolyzed, or severely lipemic specimens.

NOTE: Separate serum from cells ASAP or within 2 hours of collection. Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as acute or convalescent. For Ehrlichia Antibody Panel also order LAB3127 Anaplasma phagocytophilum (HGA) Antibodies, IgG and IgM.

**Elastase, Fecal**

Panel Code: ELA

CPT Codes(s): 82656

Test Performed at: FAIRVIEW LABORATORY

Analytic Time: 120 hours (5 days)

Days Test Performed: Twice a week

**Specimen:**

COLLECT: Screw-Top Container

SUBMIT: 5 gm stool in a separate screw-top container FROZEN.

UNACCEPTABLE: Stool in media or preservatives. Swabs.

NOTE: Interruption of enzyme substitution therapy recommended in order to avoid the possibility of cross-reaction with porcine enzymes.



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**Electrolyte Profile****Panel Code: LT4**

Anion Gap, Calculated  
Carbon Dioxide (CO<sub>2</sub>), Total  
Chloride  
Potassium  
Sodium

**CPT Codes(s):** 80051

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

COLLECT: IP Green Top / OP Red Top / OP Lithium Heparin

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Centrifuge and separate serum from cells within 4 hours of draw. See Special Instructions for "Potassium Specimen Recommendations".

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**Electrolytes and Osmolality, Stool****Panel Code: FLY**

Chloride  
Magnesium  
Osmolality  
Osmotic Gap, Calculated  
Phosphorous  
Potassium  
Sodium

**CPT Codes(s):** 84100, 82438, 83735, 84302, 84999 x2

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Screw-Top Stool Container

SUBMIT: 20 mL VERY LIQUID stool in a screw-top container, FROZEN.

UNACCEPTABLE: Formed stool.

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**Electrophoresis, Protein, 24 Hour Cascade****Panel Code: EUC****CPT Codes(s):** 84166**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 24 HR UR-aliquot 25mL min

SUBMIT: 25 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions. A separate charge for the for the pathologist's interpretation is billed using CPT 84166 with a 26 modifier. If a monoclonal peak is present, then Immunofixation Electrophoresis, Urine will be performed and charged separately using CPT code 86335 and 86335 with a 26 modifier for the pathologist's interpretation.

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**Electrophoresis, Protein, 24 hour Urine****Panel Code: PEU****CPT Codes(s):** 84166**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 24 HR UR-aliquot 25mL min

SUBMIT: 25 mL aliquot of 24 Hour urine collection (no preservative) REFRIGERATED.

NOTE: Total Volume (mL) REQUIRED. See the Specimen Collection section of the manual for collection instructions. A separate charge for the pathologist's interpretation is billed using CPT 84166 with a 26 modifier.

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**Electrophoresis, Protein, CSF****Panel Code: PEC****CPT Codes(s):** 84166**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 1.0 mL spinal fluid REFRIGERATED.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 84166 with a 26 modifier.





**Electrophoresis, Protein, Random Urine****Panel Code: UPE****CPT Codes(s):** 84166**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Random Urine-Min 25mL

SUBMIT: 25 mL aliquot of random urine collection (no preservative) REFRIGERATED.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 84166 with a 26 modifier.

**Electrophoresis, Protein, Random Urine Cascade****Panel Code: ERC****CPT Codes(s):** 84166**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Random Urine-Min 25mL

SUBMIT: 25 mL aliquot of random urine collection (no preservative). Container REFRIGERATED.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 84166 with a 26 modifier. If a monoclonal peak is present, then Immunofixation Electrophoresis, Urine will be performed and charged separately using CPT 86335 and 86335 with a 26 modifier for the pathologist's interpretation.

**Electrophoresis, Protein, Serum****Panel Code: ELP****CPT Codes(s):** 84165**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 84165 with a 26 modifier.



**Electrophoresis, Protein, Serum, Cascade****Panel Code: ELC****CPT Codes(s):** 84165**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 84165 with a 26 modifier. If a monoclonal peak is present, then Immunofixation Electrophoresis, Serum will be performed and charged separately using CPT code 86334 and 86334 with a 26 modifier for the pathologist's interpretation.

**ENA (Antibodies to Extractable Nuclear Antigens)****Panel Code: AEN****Profile**

JO-1

RNP

SCL-70

SM ABY

SS-A

SS-B

**CPT Codes(s):** 86235 x6**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.

**Endomysial Antibody, IgA by IFA****Panel Code: EML****CPT Codes(s):** 86256**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot ASAP.

UNACCEPTABLE: Plasma. Severely lipemic, contaminated, or hemolyzed specimens.



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**Enterovirus PCR, CSF****Panel Code: EVP****CPT Codes(s):** 87498**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 1.0 mL spinal fluid REFRIGERATED; FROZEN in a separate tube if not submitted within 48 hours of collection. Minimum volume 0.5 mL. Maintain sterility.

UNACCEPTABLE: Specimens other than CSF.

NOTE: Do not centrifuge. Samples are stable refrigerated up to 72 hours.

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**Eosinophil Count****Panel Code: EOS****CPT Codes(s):** 85048**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE. Specimen must arrive within 24 hours.

UNACCEPTABLE: Specimen more than 24 hours old, less than 1 mL of whole blood in tube, or clotted specimen.

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**Eosinophil Smear, Nasal, Sputum or Urine****Panel Code: EOM****CPT Codes(s):** 89190**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Screw-Top Container

SUBMIT: 2 well-made, prepared slides from material collected. If unable to prepare slides, send specimen within 4 hours of collection, ROOM TEMP.

UNACCEPTABLE: Specimens arriving greater than 4 hours after collection, unless slides are sent. NOTE: Specimen source is REQUIRED on request form for processing.



**Epstein-Barr Virus (EBV) Capsid Antibody, IgM****Panel Code: LAB3134****CPT Codes(s):** 86665**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL.

UNACCEPTABLE: Gross hemolysis.

NOTE: This test should be ordered in conjunction with LAB863 Epstein-Barr Virus Antibodies, IgG. Specimen stable Refrigerated up to 7 days, Freeze if &gt;7 days.

**Epstein-Barr Virus Antibodies, IgG****Panel Code: EBV**

Epstein-Barr viral capsid (CVA) IgG antibody

Epstein-Barr virus Early Antigen (EA-D) antibody

Epstein-Barr virus nuclear antigen (NA-1) antibody

**CPT Codes(s):** 86664, 86665 x2**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon- Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume is 0.35 mL.

NOTE: Includes Epstein-Barr viral capsid (CVA) IgG antibody, Epstein-Barr virus Early Antigen (EA-D) antibody, &amp; Epstein-Barr virus nuclear antigen (NA-1) antibody.

**Epstein-Barr Virus by Quantitative PCR****Panel Code: LAB3137****CPT Codes(s):** 87799**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: SST® OR CSF in a sterile screw-top tube

SUBMIT: Submit: 1.0 mL serum FROZEN. Minimum volume 0.5 mL.

UNACCEPTABLE: Heparinized specimens.

NOTE: Specimen source REQUIRED. Alternate specimen: Whole Blood (Lavender Top EDTA) REFRIGERATED (stable up to 1 week) OR CSF or Plasma from Lavender Top (EDTA) FROZEN (Specimen stable Refrigerated 5 days, Frozen 1 year).



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**Erythrocyte Sedimentation Rate****Panel Code: ESR****CPT Codes(s):** 85652**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE. Specimen must arrive within 24 hours of collection. Pediatric minimum volume is 1 mL.

UNACCEPTABLE: Specimen more than 24 hours old, less than 2 mL of whole blood in tube, or clotted specimen.

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**Erythropoietin****Panel Code: EPO****CPT Codes(s):** 82668**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed specimens. EDTA plasma. Bone marrow aspirate.

NOTE: Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin).

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**Estradiol****Panel Code: EST****CPT Codes(s):** 82670**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days

NOTE: The drug Fulvestrant (Faslodex) may interfere with the Abbott Architect assay and lead to falsely elevated Estradiol results. When ordering an Estradiol test on any patient taking Fulvestrant, order a WLD and indicate the test as "Estradiol at Mayo Medical Laboratory". The methodology at Mayo Medical Laboratory is free from interference by Fulvestrant.



**Ethosuximide (Zarontin®)****Panel Code: LAB3027****CPT Codes(s):** 80168**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.5 mL. Ensure specimen to clot completely prior to centrifugation. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: SST/Gel separator tubes. Whole blood.

NOTE: Recommended collection is Pre-dose (Trough) draw- At steady state concentration.

After separation from cells, specimen stable Room Temperature 5 days, Refrigerated 1 week, Frozen 2 months. Alternate specimen: Plasma from Lavender Top (EDTA).

**Ethyl Glucuronide and Ethyl Sulfate, Urine, Quantitative****Panel Code: LAB3157****CPT Codes(s):** 80321**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tue Wed Fri Sat Sun**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 4 mL aliquot of random urine collection (no preservative) REFRIGERATED. Minimum volume 1 mL.

**F-Actin (Smooth Muscle) Antibody, IgG by ELISA with Reflex to Smooth Muscle Antibody, IgG Titer****Panel Code: AMS****CPT Codes(s):** 83516**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.25 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Plasma. Contaminated, heat-inactivated, hemolyzed, or lipemic specimens.

NOTE: If F-Actin is 20 Units or greater, then Smooth Muscle Antibody, IgG Titer (CPT 86256) will be performed and charged.



**Factor 10 Assay, Chromogenic****Panel Code: FXC****CPT Codes(s):** 85130**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Blue Top

SUBMIT: 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.

UNACCEPTABLE: Frozen whole blood specimen, partially filled tube, marked hemolysis, clotted specimen, whole blood received &gt;4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.

NOTE: Specimen must arrive in the Laboratory before 2PM to guarantee same-day reporting. See the Specimen Collection section of this manual for preparation of platelet-free plasma.

**Factor 11 Activity****Panel Code: F11****CPT Codes(s):** 85270**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube.

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

**Factor 12 Activity****Panel Code: F12****CPT Codes(s):** 85280**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube.

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.



**Factor 2 (Prothrombin) by PCR****Panel Code: PGM****CPT Codes(s):** 81240**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood ROOM TEMPERATURE. Minimum volume 2 mL.

UNACCEPTABLE: Frozen, clotted, or opened specimen, incorrect anticoagulant, specimen more than 5 days old. Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

NOTE: Alternate specimen: Yellow Top (ACD Solution A) whole blood ROOM TEMPERATURE. Patients are only tested ONCE. Bone Marrow Transplant Patients; If a patient is the recipient of an allogeneic transplant, this test must be done on a pre-transplant sample. If both Factor 5 Leiden &amp; Factor 2 (Prothrombin) mutations are requested, then order LAB2143 Factor 2 and 5 Mutation Analysis (F5F2MD).

**Factor 2 Activity****Panel Code: FA2****CPT Codes(s):** 85210**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube.

NOTE: If the patient's hematocrit is &gt;55%, contact HML for a special collection tube. Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

\* This test is different from the Factor 2 Mutation (Prothrombin Mutation) \*

**Factor 5 Activity****Panel Code: FA5****CPT Codes(s):** 85220**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or Room Temp whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube.

NOTE: This test is different from the Factor 5 Leiden Mutation. Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.





**Factor 5 Leiden and Factor 2 Prothrombin Mutation Panel****Panel Code: LPP****CPT Codes(s):** 81240, 81241**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood ROOM TEMPERATURE. Minimum volume 2 mL.

UNACCEPTABLE: Frozen, clotted, or opened specimen, incorrect anticoagulant, specimen more than 5 days old. Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

NOTE: Alternate specimen: Yellow Top (ACD Solution A) whole blood ROOM TEMPERATURE. Patients are only tested ONCE. Bone Marrow Transplant Patients: If a patient is the recipient of an allogeneic transplant, this test must be done on a pre-transplant sample.

**Factor 5 Leiden Mutation by PCR****Panel Code: FVL****CPT Codes(s):** 81241**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood ROOM TEMPERATURE. Minimum volume 2 mL.

UNACCEPTABLE: Frozen, clotted, or opened specimen, incorrect anticoagulant, specimen more than 5 days old. Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

NOTE: Alternate specimen: Yellow Top (ACD Solution A) whole blood ROOM TEMPERATURE. Patients are only tested ONCE. Bone Marrow Transplant Patients; If a patient is the recipient of an allogeneic transplant, this test must be done on a pre-transplant sample. If both Factor 5 Leiden &amp; Factor 2 (Prothrombin) mutations are requested, then order LAB2143 Factor 2 and 5 Mutation Analysis (F5F2MD).



**Factor 7 Activity****Panel Code: FA7****CPT Codes(s):** 85230**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted or underfilled collection tube.

NOTE: Centrifuge for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

**Factor 8 Activity****Panel Code: FA8****CPT Codes(s):** 85240**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube.

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

Recommended testing for Von Willebrand Disease must be individually ordered and

includes Factor 8, Von Willebrand Antigen and Von Willebrand Factor Activity Cascade.

**Factor 9 Activity****Panel Code: FA9****CPT Codes(s):** 85250**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately or whole blood which must be received at U of M lab within 4 hours of collection.

UNACCEPTABLE: Specimen not received frozen, whole blood received at U of M lab &gt;4 hours after collection, clotted, or underfilled collection tube..

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.



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**Fat Qualitative, Fecal****Panel Code: FQS****CPT Codes(s):** 82705**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Clean Screw-Top Container

SUBMIT: A fresh random stool specimen REFRIGERATED. Specimen must arrive within 48 hours of collection.

UNACCEPTABLE: Specimen more than 48 hours old.

NOTE: This is a qualitative screen only.

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**Fecal Fat Quantitative****Panel Code: FQT****CPT Codes(s):** 82710**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: 48-72 Hour Stool Container

SUBMIT: Entire fecal collection in container supplied by HML, FROZEN. Store refrigerated during collection.

NOTE: 48 or 72 hour collections are recommended. Laxatives must NOT be used during collection period. Barium interferes with the test procedure. Synthetic fat substitutes (i.e. Olestra) interfere with the test procedure. For 3 days prior and throughout the collection period, patient must follow a controlled diet of 100-150 g of fat per day. A separate collection must take place if electrolytes are also ordered.

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**Fecal Occult Blood, Colorectal Cancer Screen,  
Qualitative, Immunochemical (FIT)****Panel Code: LAB3059****CPT Codes(s):** 82274**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:**All**Specimen:****COLLECT:** Fecal Occult Blood Test Kit**SUBMIT:** Collect a random stool specimen. Follow these instructions for collection and submission: 1) Fill in required information on sampling bottle. 2) Place supplied collection paper inside toilet bowl; 3) Deposit stool sample on top of collection paper. 4) Open green cap of sampling bottle by twisting and lifting; 5) Scrape the surface of the stool with the sample probe. Cover grooved portion of the probe completely with stool. 6) Insert probe into bottle and snap green cap on tightly. Do not reopen. 7) Wrap bottle in absorbent pad and place in biohazard bag. Put in the mailing envelope provided. 8) Return envelope to laboratory REFRIGERATED (preferred) or Ambient.**UNACCEPTABLE:** Inoculated sample bottle not received within 15 days of collection if sent at room temperature and 30 days if sent at refrigerated temperature. Sampling bottle used beyond expiration date. Liquid feces. Feces stored in a container other than sampling bottle. Stool specimen contaminated with urine or water from the toilet bowl.**NOTE:** Remove toilet bowl cleaners from toilet tank and flush twice prior to specimen collection. Urine and excessive dilution of samples with water from the toilet may cause erroneous test results. Do not collect samples during or until 3 days after menstrual period, or if hematuria or obvious rectal bleeding, i.e. hemorrhoids, are present. Coumadin and other prescription medications are usually not restricted. Specimen must be collected in specific sample vial within 4 hours of defecation. Specimen stable 15 days at room temperature, 30 days if refrigerated.**Fecal WBC's****Panel Code: FWC****CPT Codes(s):** 89055**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** All**Specimen:****COLLECT:** Clean Screw-Top Container**SUBMIT:** 1.0 mL liquid or pea-sized portion of stool REFRIGERATED.**UNACCEPTABLE:** Stool in preservative. Specimens over 72 hours.

**Felbamate (Felbatol®)****Panel Code: FEL****CPT Codes(s):** 80299**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

NOTE: Recommended collection is immediately prior to dose.

**FENA (Fractional Excretion of Sodium)****Panel Code: FES**

Creatinine, urine &amp; serum

Sodium, urine &amp; serum

**CPT Codes(s):** 82565, 82570, 84295, 84300**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top and Random Urine in Screw-Top

SUBMIT: 1 mL serum REFRIGERATED AND 10 mL aliquot of random urine (no preservative)  
REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed serum specimen.

NOTE: Blood should be drawn within 4 hours of urine collection. Label specimens appropriately  
(serum, urine).**Fentanyl and Metabolite, Urine, Quantitative****Panel Code: FTL**

Fentanyl

Norfentanyl

**CPT Codes(s):** 80354**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw Top Container

SUBMIT: 4 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.  
Minimum volume 0.5 mL

UNACCEPTABLE: Specimens exposed to repeated freeze/thaw cycles.5

NOTE:



**Ferritin****Panel Code: FER****CPT Codes(s):** 82728**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days. May require ABN form. Pediatric minimum volume is 120 uL.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: The performance of this assay has not been established for individuals younger than 13 months of age.

**Fetal Bleed Screen****Panel Code: FBS****CPT Codes(s):** 85461**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED. Specimen must be tested within two days of collection. If a fetal bleed screen is positive, a Kleihauer-Betke stain will be performed and charged separately using CPT code 85460. If fetal screen is negative, testing is complete.

NOTE: Order FBS only on Rh negative women who've delivered an Rh positive child, had amniocentesis, version, or abortion and are  $\geq$  13 weeks gestation where Rh of fetus is unknown. Order KLB for all other fetal bleed testing.**Fetal Fibronectin****Panel Code: FFN****CPT Codes(s):** 82731**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Adeza Biomedical Specimen Collection Kit

NOTE: Specimen stable 8 hrs RT, 3 days refrigerated or 3 months frozen. Testing is PERFORMED at St John's and Woodwinds Lab(schedule courier accordingly). The number of weeks gestation is REQUIRED. Recommend sampling between 24 wks and 35 wks gestation. See the Specimen Collection section for collection instructions. Do not perform test on women with any of the following conditions: multiple fetuses, partial or complete placenta previa, cervical cerclage, cervical dilation  $>3$  cm, ruptured amniotic membranes, moderate or gross vaginal bleeding or sexual intercourse within 24 hrs.

**Fibrinogen****Panel Code: FIB****CPT Codes(s):** 85384**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top**SUBMIT:** 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.**UNACCEPTABLE:** Frozen whole blood specimen, partially filled tube, or marked hemolysis, clotted specimen, whole blood received >4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.**NOTE:** See Specimen Collection section of this manual for preparation of platelet-free plasma.**First Trimester Screen Biochemistry Markers****Panel Code: LAB3193****CPT Codes(s):** 84163 84704 82105**Test Performed at:** NTD Labs (Eurofins)**Analytic Time:****Days Test Performed:** Varies**Specimen:****COLLECT:** Whole Blood on Filter paper**SUBMIT:** Reference laboratory will provide filter paper (for sample collection), envelope and FedEx label. The specimen cannot be collected with any additives. 1. Obtain blood specimen Monday through Friday during patient's first trimester.**UNACCEPTABLE:** Blood to both sides of the paper. Capillary tubes used to collect the sample. Paper circles touched prior to or after blood collection.**Flecainide (Tambocor®)****Panel Code: FLC****CPT Codes(s):** 80299**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Thu Sat**Specimen:****COLLECT:** Plain Red Top-2 mL Serum**SUBMIT:** 2 mL serum REFRIGERATED. Minimum volume 0.5 mL. Specimen must be centrifuged and aliquoted within 6 hours of collection.**UNACCEPTABLE:** Gel separator tubes or gels of any kind.**NOTE:** Recommended collection is Pre-dose (trough) draw - At steady state concentration.

Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin) or Lavender Top (EDTA). Centrifuge and aliquot within 6 hours of collection.



**Flow Cytometry****Panel Code: FLO**

Call Flow Cytometry Laboratory (651-232-4188) prior to sample submission.  
Please indicate probable diagnosis.

**CPT Codes(s):** 88184, 88185

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** See Below

**SUBMIT:** Peripheral blood: 3 mL whole blood in lavender top (EDTA) tube at ROOM TEMP.

Bone marrow: 2 mL bone marrow in lavender top (EDTA) at ROOM TEMP. Lymph nodes and Extranodal Tissue: Submit specimen from surgical biopsy or needle biopsy in RPMI 1640 supplied by HealthEast Medical Laboratory. Forward promptly at ROOM TEMP before 2 p.m.

**UNACCEPTABLE:** Refrigerated or frozen specimen. Rec'd after 2pm Fridays.

**NOTE:** Specimen source is REQUIRED. CPT code 88184 is used for the first marker, 88185 for each additional marker. CPT code 88187 is used for Pathology interpretation (2-8 markers), 88188(9-15 markers), 88189 (16+).

**Fluoxetine (Prozac®)****Panel Code: FLU**

Norfluoxetine

**CPT Codes(s):** 80299

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 192 hours (8 days)

**Days Test Performed:** Wed

**Specimen:**

**COLLECT:** 1 Plain Red Top

**SUBMIT:** 1 mL serum REFRIGERATED.

**UNACCEPTABLE:** Specimen drawn in an SST® tube.

**NOTE:** Serum must be removed from cells within 2 hours of draw.

**Folate, Serum****Panel Code: FOL**

**CPT Codes(s):** 82746

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top (Fasting & Protect From Light)

**SUBMIT:** 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days. Protect from light.

**UNACCEPTABLE:** Hemolyzed specimen.

**NOTE:** Patient fasting 8 hours.





**Fragile X Molecular Analysis with Reflex to Methylation Testing****Panel Code: LAB3037****CPT Codes(s):** 81243**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 336 hours (14 days)**Days Test Performed:** Mon**Specimen:**

COLLECT: Yellow ACD SOLN A

SUBMIT: 10 mL whole blood ROOM TEMPERATURE. Minimum volume 5 mL.

UNACCEPTABLE: Frozen or clotted specimen, incorrect anticoagulant, specimen more than 5 days old. Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

NOTE: This molecular test analyzes only for the trinucleotide repeats in the Fragile-X gene. Patients are only tested ONCE; if duplicate sample is collected, testing is canceled, credited and original results and collection date reported. Bone Marrow Transplant Patients; If a patient is the recipient of an allogeneic transplant, this test must be done on a pre-transplant sample. Methylation testing will be sent to ARUP for FMR1 repeats of 55 or greater. Additional charges apply.

**Fructosamine****Panel Code: FSM****CPT Codes(s):** 82985**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Mildly hemolyzed and icteric specimen.

NOTE: Centrifuge and aliquot within 2 hours of collection.

**FSH****Panel Code: FSH****CPT Codes(s):** 83001**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top/OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.



**G-6-PD (Glucose-6-Phosphate Dehydrogenase),  
Qualitative****Panel Code: G6S****CPT Codes(s):** 82960**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED if not received within 4 hours. Refrigerated specimens acceptable for up to one week.

UNACCEPTABLE: Frozen specimen or markedly hemolyzed specimen. Volume less than 1 mL.

**Gabapentin (Neurontin®)****Panel Code: GBP****CPT Codes(s):** 80171**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Thu Fri Sat**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).

NOTE: Recommended collection is Pre-dose (trough) draw - At steady state concentration.

Alternate specimen: Plasma from Lavender Top (EDTA). Centrifuge and aliquot within 2 hours of collection.



**Ganglioside (Asialo-GM1, GM2, GD1a, GD1b, and GQ1b) Antibodies****Panel Code: GM1**

Asialo-GM1 Antibodies, IgG/IgM

GD1a Antibodies, IgG/IgM

GD1b Antibodies, IgG/IgM

GM1 Antibodies, IgG/IgM

GM2 Antibodies, IgG/IgM

GQ1b Antibodies, IgG/IgM

**CPT Codes(s):** 83516 x2**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.3 mL serum FROZEN. Minimum volume: 0.1 mL. Separate serum from cells ASAP.

UNACCEPTABLE: Room temperature specimens. Plasma, CSF, or other body fluids.

Contaminated, heat-inactivated, hemolyzed, severely icteric, or lipemic specimens.

**Gastrin****Panel Code: GSN****CPT Codes(s):** 82941**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Red Top (Fasting 8 Hours)

SUBMIT: 1 mL serum FROZEN in a separate tube.

UNACCEPTABLE: Markedly hemolyzed specimen.

NOTE: Patient must be fasting 8 hours.

**Gentamicin****Panel Code: GNT****CPT Codes(s):** 80170**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Date and time of last dose are REQUIRED. PEAK Specimen: Draw blood 30 minutes after intramuscular dose or 15 minutes after intravenous dose. TROUGH specimen: Draw blood 15 minutes before next dose. Label specimen appropriately (peak or trough and collection time).



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**GGT (Gamma GT)****Panel Code: GGT**

**CPT Codes(s):** 82977  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. May require ABN form.

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**Giardia Detection, Stool****Panel Code: GSA**

**CPT Codes(s):** 87015, 87269  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 8 hours  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Profifix™  
**UNACCEPTABLE:** Preserved stool more than 1 week old. Unpreserved stool more than 48 hours old. Stool in culture media.  
**NOTE:** Positives will be reported to MDH. This test may also detect cryptosporidia oocysts. HML will notify client and request an order for the result.

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**Gliadin Antibodies IgA and IgG****Panel Code: GAG**

**CPT Codes(s):** 83516 x2  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Mon Thu

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1mL serum REFRIGERATED. FROZEN is not submitted within 48 hours.  
**UNACCEPTABLE:** Specimens > 48 hours old if not frozen. Markedly hemolyzed or lipemic specimens.

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**Globulin****Panel Code: GLB**

**CPT Codes(s):** 82040, 84155  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED.

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**Glomerular Basement Membrane (GBM) Antibody, IgG****Panel Code: GBM****CPT Codes(s):** 83516**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL. Centrifuge and aliquot ASAP.

UNACCEPTABLE: Gross hemolysis.

**Glucose****Panel Code: GLU****CPT Codes(s):** 82947**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Green Top or Red Top

SUBMIT: 1 mL serum REFRIGERATED. Centrifuge and separate serum from cells within 4 hours of draw. May require ABN form. Pediatric minimum volume is 210 uL.

NOTE: Patient fasting 8-14 hours. ADA glucose guidelines released 1/2007 Fasting plasma glucose: 70-99 mg/dL. Impaired fasting plasma glucose: 100-125 mg/dL Provisional diagnosis of diabetes fasting plasma glucose: &gt; or = 126 mg/dL

**Glucose Tolerance, Non-Gestational (2 Hour)****Panel Code: GT2****CPT Codes(s):** 82947, 82950**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Grey Tops X2

SUBMIT: 1mL plasma REFRIGERATED for each time period (centrifuge and separate plasma from cells within 4 hours).

NOTE: See the Specimen Collection section of this manual for collection instructions. Patient should be maintained on a &gt;150 g/day carbohydrate diet ("unrestricted") for three days prior to this test and have unrestricted physical activity. Patient is not allowed to smoke or drink for the duration of test. Sips of water are allowed if needed. Patient must remain seated throughout the test. Vomiting negates the test.



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**Glucose, 1 Hour Post Prandial****Panel Code: GL1****CPT Codes(s):** 82947**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (1 Hour Postprandial)

SUBMIT: 1 mL serum REFRIGERATED. Centrifuge and separate serum from cells within 4 hours of draw. May require ABN form.

NOTE: Specimen collected 1 hour after meal. Current American Diabetic Association (ADA) guidelines do not include recommendations using 1 hour post-prandial glucose measurements.

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**Glucose, 2 Hour Post Prandial****Panel Code: GL2****CPT Codes(s):** 82947**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (2 Hours Postprandial)

SUBMIT: 1 mL serum REFRIGERATED. Centrifuge and separate serum from cells within 4 hours of draw. May require ABN form.

NOTE: Specimen collected 2 hours after meal.

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**Glucose, Body Fluid****Panel Code: GLF****CPT Codes(s):** 82945**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 0.5 mL body fluid REFRIGERATED.

NOTE: Specimen source is REQUIRED.

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**Glucose, CSF****Panel Code: GLC****CPT Codes(s):** 82945**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 0.5 mL spinal fluid REFRIGERATED. Specimen must arrive within 2 hours of collection.



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**Glucose, Gestational Challenge (1 Hour)****Panel Code: G50****CPT Codes(s):** 82950**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Grey Top (Post)

SUBMIT: 1 mL plasma REFRIGERATED.

NOTE: Have patient drink a 50 g dose of the glucose tolerance beverage. Ingestion should be completed within 10 minutes. Record the time the dosage is given. Draw blood 1 hour after glucose tolerance beverage is given. Patient is not allowed to smoke or drink for the duration of test. Sips of water are allowed if needed. Patient must remain seated throughout the test. Vomiting negates the test.

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**Glucose, Gestational Challenge (2 hour)****Panel Code: G2G****CPT Codes(s):** 82951**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Grey Tops x3 - Collect 2 hours after Glucola administration

SUBMIT: 1 ml plasma REFRIGERATED for each time period.

NOTE: See the Specimen Collection section of this manual for collection instructions. Have patient drink a 75 g dose of the glucose tolerance beverage. Record the time the dosage is given. Patient should be maintained on a >150 g/day carbohydrate diet ("unrestricted") for three days prior to this test and have unrestricted physical activity. Patient is not allowed to smoke or drink for the duration of test. Sips of water are allowed if needed. Patient must remain seated throughout the test. Vomiting negates the test.

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**Glucose, Gestational Challenge (3 hour)****Panel Code: GTG****CPT Codes(s):** 82951, 82952**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Grey Tops x4 - Collect 3 hours after Glucola administration

SUBMIT: 1 mL plasma REFRIGERATED for each time period.

NOTE: See the Specimen Collection section of this manual for collection instructions. Patient should be maintained on a >150 g/day carbohydrate diet ("unrestricted") for three days prior to this test and have unrestricted physical activity. Patient is not allowed to smoke or drink for the duration of test. Sips of water are allowed if needed. Patient must remain seated throughout the test. Vomiting negates the test.

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**Glucose-6-Phosphate Dehydrogenase****Panel Code: GPD****CPT Codes(s):** 82955**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Yellow ACD Soln A

SUBMIT: 3 mL whole blood REFRIGERATED in original tube. Minimum volume 1.5 mL.

UNACCEPTABLE: Clotted or hemolyzed specimens. Frozen specimens.

NOTE: Enzyme most stable in acid citrate dextrose (ACD). Alternate specimen: Whole blood in Lavender Top (EDTA) or Green Top (Lithium or Sodium Heparin).

Patients who have recently received transfusions have normal donor cells that may mask G-6-PD deficient erythrocytes.

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**Glutamic Acid Decarboxylase Antibody****Panel Code: GAD****CPT Codes(s):** 86341**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN. Minimum volume 0.5 mL

UNACCEPTABLE: Plasma. Grossly hemolyzed specimens.

NOTE: Specimen is stable at Room Temperature 24 hours, Refrigerated 1 week, Frozen 3 months.

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**Glycosylated Hemoglobin A1c****Panel Code: A1C****CPT Codes(s):** 83036**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED for up to 7 days. May require ABN form.





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**Gram Stain****Panel Code: GRS****CPT Codes(s):** 87205**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** All**Specimen:**

COLLECT: Specimen in Sterile Container

SUBMIT: Specimen in container appropriate for culture on that specimen type.

NOTE: Specimen source is REQUIRED. If the specimen submitted is a swab and a culture is also ordered, a second CultureSwab™ must be submitted for the culture.

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**Group A Strep, RNA Direct Detection, Throat****Panel Code: GAT****CPT Codes(s):** 87650**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED

UNACCEPTABLE: Specimen collected on wooden swab, swabs in gel media, swabs in charcoal media, bloody swabs, Eswabs. Specimen older than 5 days refrigerated OR older than 48 hours at room temperature. Frozen specimen.

NOTE: See the specimen collection section of this manual for collection instructions.

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**Group B Strep Screen by PCR****Panel Code: GBS****CPT Codes(s):** 87653**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 18 hours**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Vaginal/Rectal swab in CultureSwab™ at ROOM TEMP for 24 hours or refrigerated for up to 6 days.

UNACCEPTABLE: Cervical or vaginal collection only. Specimens other than vaginal/rectal. Dry swab, charcoal swab.

NOTE: Indicate patient's penicillin allergy status when placing order. If patient is allergic to penicillin and Group B Strep is isolated, a susceptibility panel will be performed and charged separately using CPT code 87186.



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**H. pylori Antigen, Stool****Panel Code: PYL****CPT Codes(s):** 87338**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Screw-Top Container

SUBMIT: 1 g stool in a separate screw-top container, FROZEN.

UNACCEPTABLE: Feces in transport media, swabs, or preservatives.

NOTE: Specimen stable Refrigerated up to 72 hours, Freeze if &gt;72 hours before testing is performed.

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**Haemophilus influenzae Type B Antibody, IgG****Panel Code: HAB****CPT Codes(s):** 86684**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimen

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**Haptoglobin****Panel Code: HPT****CPT Codes(s):** 83010**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Markedly hemolyzed specimens.

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**HDL Cholesterol****Panel Code: HDL****CPT Codes(s):** 83718**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (Fasting)

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

NOTE: Patient fasting 12-14 hours.



**Heavy Metal Panel (As, Hg, Pb), 24 Hour Urine****Panel Code: MTU**

Arsenic  
Lead  
Mercury

**CPT Codes(s):** 82175, 83655, 83825**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: 24 Hour Metal-free Container

SUBMIT: 10 mL aliquot of 24 hour urine collection (metal-free) REFRIGERATED in a metal-free container.

UNACCEPTABLE: Specimen not received in a metal-free container.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

**Heavy Metals Screen, Whole Blood****Panel Code: MTB**

Arsenic  
Lead  
Mercury

**CPT Codes(s):** 82175, 83655, 83825**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: NavyEDTA-WHLBld-MetF

SUBMIT: 2 mL whole blood REFRIGERATED.

UNACCEPTABLE: Specimen clotted or not received in a metal-free tube.

**Helper Suppressor Panel & Extended Helper  
Suppressor Panel****Panel Code: HSP**

Panel code HSP=Helper Suppressor

**CPT Codes(s):** 86359, 86360**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood ROOM TEMP. Specimen to be collected Monday through Thursday only and not on the day before a holiday. Specimen must arrive before 2 p.m.

UNACCEPTABLE: Refrigerated, clotted, or markedly hemolyzed specimen.

NOTE: An Extended Helper/Suppressor Panel is available in addition to the regular Helper/Suppressor Panel. For more details, contact the Flow Cytometry Lab at 651-232-4188. Additional CPT codes 86355 and 86357 will be added to the regular Helper Suppressor panel for this purpose.



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**Hematocrit****Panel Code: HCT****CPT Codes(s):** 85014**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED.

UNACCEPTABLE: Volume less than 1 mL in tube; specimen &gt; 24 hours old.

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**Hemochromatosis Mutation Analysis (S65C, C282Y and H63D)****Panel Code: LAB3033****CPT Codes(s):** 81256**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 240 hours (10 days)**Days Test Performed:** Mon**Specimen:**

COLLECT: Lavender Top - Whole Blood

SUBMIT: 4 mL whole blood ROOM TEMPERATURE. Minimum volume 2 mL.

UNACCEPTABLE: Frozen or clotted specimen, incorrect anticoagulant, specimen more than 5 days old. Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

NOTE: Alternate specimen: Yellow Top (ACD, Solution A) whole blood ROOM TEMPERATURE. Include patient history relating to hemochromatosis. Patients are only tested ONCE; if duplicate sample is collected, testing is canceled, credited and original results and collection date reported. Bone Marrow Transplant Patients; If a patient is the recipient of an allogeneic transplant, this test must be done on a pre-transplant sample.

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**Hemoglobin****Panel Code: HGB****CPT Codes(s):** 85018**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED.

UNACCEPTABLE: Volume less than 1 mL in tube; specimen &gt; 24 hours old.



**Hemoglobinopathy / Thalassemia Cascade****Panel Code: ELB**

Hemoglobin A2  
Hemoglobin Electrophoresis  
Hemoglobin F

**CPT Codes(s):** 83020, 83021

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** Varies

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 3 mL whole blood REFRIGERATED. Stable for 4 days at 2°-8° C.

**NOTE:** Assay is performed on varying days. A separate charge for the pathologist interpretation is billed using CPT code 83020 with a 26 modifier. Reflex testing (performed at additional charge) may include any or all of the following: hemoglobin S screen (CPT 85660), unstable hemoglobin (CPT 83068), isoelectric focusing confirms (CPT 82664), hemoglobin variant by mass spectrometry (CPT 83789), hemoglobin F red cell distribution (CPT 88184), Hgb Electrophoresis Molecular (CPT 81257, 81401, 81403).



**Hemogram 1 (CBC w/Differential)****Panel Code: HM1**

Basophils  
Basophils (Absolute)  
Eosinophils  
Eosinophils (Absolute)  
Hematocrit  
Hemoglobin  
Lymphs  
Lymphs (Absolute)  
MCHC  
MCV  
Mean Platelet Volume  
Monocytes  
Monocytes (Absolute)  
Neutrophils  
Neutrophils (Absolute)  
Platelet Count  
RBC  
RDW  
WBC

**CPT Codes(s):** 85025

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE if < 24 hours old.

May require ABN form. Pediatric minimum volume is 1/0.4 - 1 mL tube/0.4 microtainer;  
EDTA tube must have at least 1 mL of blood.

**UNACCEPTABLE:** Volume less than 1 mL. Peripheral smears without lavender top. Specimen  
> 24 hours old.

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**Hemogram 2 (CBC w/o Differential)****Panel Code: HM2**

Hematocrit  
Hemoglobin  
MCH  
MCHC  
MCV  
Mean Platelet Volume  
Platelet Count  
RBC  
RDW  
WBC

**CPT Codes(s):** 85027

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE if < 24 hours old.

May require ABN form.

**UNACCEPTABLE:** Volume less than 1 mL. Specimen > 24 hours old.

**HemoQuant, Fecal****Panel Code: HEQ**

**CPT Codes(s):** 84126

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri Sat

**Specimen:**

**COLLECT:** Hemoquant Container

**SUBMIT:** 1 g stool from a single defecation REFRIGERATED. May require ABN form.

Collection container available from HML.

**NOTE:** Patient should be instructed to refrain from red meat and aspirin for 3 days prior to specimen collection.

**Hemosiderin, Urine****Panel Code: FEU**

**CPT Codes(s):** 83070

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container

**SUBMIT:** 10 mL aliquot from random urine collection (no preservative) REFRIGERATED.

Specimen must arrive within 4 hours of collection.

**UNACCEPTABLE:** Specimen more than 4 hours old or with preservative. Volume less than 5 mL of urine.



**Heparin Induced Thrombocytopenia Screen****Panel Code: HIT****CPT Codes(s):** 86022**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: BLUE PItPrPlsmaFZw/4hr

SUBMIT: 1 mL platelet poor plasma from Blue Top (Citrate) tube FROZEN immediately in 2 tubes.

UNACCEPTABLE: Underfilled or overfilled collection tubes, clotted specimens, specimens not received or processed and frozen within 4 hours of collection. Samples with excessive hemolysis, icterus or lipemia should not be used.

NOTE: If the patient's hematocrit is &gt;55%, then a special collection tube is required with the volume of anticoagulant in the tube adjusted. Provide patient's most recent platelet count. To obtain Platelet Poor Plasma: Centrifuge specimens for 30 minutes at 3000 rpm. Aliquot plasma into 2 tubes and freeze. Whole blood Blue Top tubes may be sent at ROOM TEMPERATURE if they will arrive at Fairview/UMMC within 4 hours of collection.

**Heparin Induced Thrombocytopenia, ELISA****Panel Code: LAB3152****CPT Codes(s):** 86022**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: BLUE PItPrPlsmaFZw/4hr

SUBMIT: 1 mL platelet poor plasma from Blue Top (Citrate) tube FROZEN immediately in 2 tubes.

UNACCEPTABLE: Blue top collection tubes: Underfilled or overfilled tubes, clotted specimens, specimens not received or processed and frozen within 4 hours of collection. Specimen collected in an SST® tube. Samples with excessive hemolysis, icterus or lipemia should not be used.

NOTE: If the patient's hematocrit is &gt;55%, then a special collection tube is required with the volume of anticoagulant in the tube adjusted. Provide patient's most recent platelet count. To obtain Platelet Poor Plasma: Centrifuge specimens for 30 minutes at 3000 rpm. Aliquot plasma into 2 tubes and freeze. Whole blood Blue Top tubes may be sent at ROOM TEMPERATURE if they will arrive at Fairview/UMMC within 4 hours of collection. Alternate specimen: Serum from Plain Red Top FROZEN.





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**Hepatic Profile****Panel Code: LFT**

Albumin  
Alkaline Phosphatase  
ALT (SGPT)  
AST (SGOT)  
Direct Bilirubin  
Protein, Total  
Total Bilirubin

**CPT Codes(s):** 80076**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / Red Top

SUBMIT: 1 mL serum REFRIGERATED. Keep out of light as much as possible. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

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**Hepatitis A Antibody, IgG (Anti-HAV, IgG)****Panel Code: HAV****CPT Codes(s):** 86708**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

NOTE: Performance of the Anti-HAV, IgG test has not been established with neonatal specimens (&lt;= 2 months of age).

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**Hepatitis A Antibody, IgM (Anti-HAV, IgM)****Panel Code: HAM****CPT Codes(s):** 86709**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.



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**Hepatitis A Immune Status****Panel Code: HAT****CPT Codes(s):** 86708**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

NOTE: Performance of the Anti-HAV, IgG test has not been established with neonatal specimens (&lt;= 2 months of age).

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**Hepatitis Acute Evaluation****Panel Code: HAE**

Hepatitis B Surface Antigen (HBsAg)

Hepatitis A Antibody, IgM (Anti-HAV, IgM)

Hepatitis B Core Antibody, IgM (Anti-HBc, IgM)

Hepatitis C Antibody (Anti-HCV)

**CPT Codes(s):** 80074**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 6 days. May require ABN form.

UNACCEPTABLE: Markedly hemolyzed specimens.

NOTE: If Hepatitis B Surface Antigen is positive, it will be confirmed by neutralization testing unless patient previously confirmed positive for HBsAg.

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**Hepatitis B Chronic Evaluation****Panel Code: HCE**

Hepatitis B Core Antibody (Anti-HBc)

Hepatitis B Surface Antibody (Anti-HBs)

**CPT Codes(s):** 86704, 86706**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED up to 7 days.



**Hepatitis B Core Antibody (Anti-HBc), Total****Panel Code: HBC****CPT Codes(s):** 86704**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

**Hepatitis B Core Antibody, IgM (Anti-HBc, IgM)****Panel Code: BCM****CPT Codes(s):** 86705**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

**Hepatitis B DNA Quantitative; Real-Time PCR****Panel Code: HBQ****CPT Codes(s):** 87517**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** twice weekly**Specimen:**

COLLECT: Red Top(1 mL min)

SUBMIT: 2 mL serum REFRIGERATED. Minimum volume 1 mL.

UNACCEPTABLE: Heparinized samples, frozen whole blood, specimen types other than red or SST serum or EDTA plasma.

NOTE: Uses of this test include diagnosis of some cases of early acute HBV infection (before the appearance of HBsAg), distinguishing active from inactive HBV infection, monitoring response to anti-HBV therapy, and quantification of HBV DNA in plasma/serum of patients with chronic HBV infection. Samples are stable refrigerated up to 7 days or frozen up to 40 days. Alternate specimen: EDTA plasma.

**Hepatitis B Surface Antibody (Anti-HBs)****Panel Code: ABS****CPT Codes(s):** 86706**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.



**Hepatitis B Surface Antibody (Anti-HBs) Vaccine Check****Panel Code: HBV****CPT Codes(s):** 86706**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

**Hepatitis B Surface Antigen****Panel Code: BSA****CPT Codes(s):** 87340**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 6 days.

UNACCEPTABLE: Markedly hemolyzed specimens.

NOTE: If Hepatitis B Surface Antigen is positive, it will be confirmed by neutralization testing unless patient previously confirmed positive for HBsAg.

**Hepatitis Be Antibody****Panel Code: ABE****CPT Codes(s):** 86707**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Heat-inactivated, grossly hemolyzed, or lipemic specimens. Specimens containing particulate material or collected in citrate-based anticoagulant. Room temperature specimens.

NOTE: Specimen stable Refrigerated 6 days, Frozen indefinitely (avoid repeated freeze/thaw cycles). Alternate specimen: Plasma from Lavender Top (EDTA).



**Hepatitis Be Antigen****Panel Code: BEA****CPT Codes(s):** 87350**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Heat-inactivated, grossly hemolyzed, or lipemic specimens. Specimens containing particulate material or collected in citrate-based anticoagulant. Room temperature specimens.

NOTE: Order this assay only when a specimen is reactive for hepatitis B surface antigen. Specimen stable Refrigerated 6 days, Frozen indefinitely (avoid repeated freeze/thaw cycles). Alternate specimen: Plasma from Lavender Top (EDTA).

**Hepatitis C Antibody (Anti-HCV)****Panel Code: HCV****CPT Codes(s):** 86803**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Hemolyzed specimen.

**Hepatitis C RNA Quantitation by RT-PCR****Panel Code: HCQ****CPT Codes(s):** 87522**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Red Top (1 mL min)

SUBMIT: 2 mL serum REFRIGERATED. Minimum volume 1 mL.

UNACCEPTABLE: Heparinized samples, frozen whole blood, specimen types other than red or SST serum or EDTA plasma.

NOTE: Separate serum or plasma within 24 hours of collection.

Alternate specimen: EDTA plasma.

Use of this test:

- The detection of acute hepatitis C virus (HCV) infection before the appearance of HCV antibodies in serum (i.e., less than 2 months from exposure):



**Hepatitis C Virus High-Resolution Genotype by Sequencing****Panel Code: GHC**

**CPT Codes(s):** 87902  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 192 hours (8 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 2 mL serum FROZEN. Minimum volume 0.5 mL.  
**UNACCEPTABLE:** Heparinized specimens. Room Temperature specimens.  
**NOTE:** Alternate specimen: Plasma from Lavender Top (EDTA).  
After separation from cells, specimen is stable Refrigerated 72 hours, Frozen 4 months.  
Submit most recent viral load and test date if available. This test may be unsuccessful if the HCV RNA viral load is less than log 5.0 or 100,000 IU/mL. Do not order prior to molecular confirmation of positive HCV screen.

**Hepatitis Delta Virus Antibody****Panel Code: HDV**

**CPT Codes(s):** 86692  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Mon Wed Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.  
**NOTE:** Order this assay only when patient has an acute or chronic hepatitis B infection. This test detects total antibodies (IgG and IgM) to the hepatitis Delta agent. Specimen stable Refrigerated 5 days, Frozen indefinitely (avoid repeated freeze/thaw cycles). Alternate specimen: Plasma from Green Top (Lithium or Sodium Heparin), Lavender Top (EDTA), or Blue Top (Citrate).

**Herpes simplex Virus (Type 1 and 2) IgG Antibody****Panel Code: HSG**

HSV1-IgG  
HSV2-IgG

**CPT Codes(s):** 86695, 86696  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** Mon Wed Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Hemolyzed or lipemic specimen.  
**NOTE:** Specimen may be refrigerated up to 7 days OR frozen indefinitely.



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**High Sensitivity Paroxysmal Nocturnal  
Hemoglobinuria Assay by Flow Cytometry****Panel Code: PNH**

**CPT Codes(s):** 88184 x1, 88185 x7  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** Lav Top (Whole Blood)  
**SUBMIT:** 4 mL whole blood REFRIGERATED. Minimum volume 2 mL. Specimen must arrive at Fairview Diagnostic Laboratories within 24 hours of collection.  
**UNACCEPTABLE:** Improper specimen collection or handling, blood with low WBC and/or percentage of granulocytes, clotted specimen, specimen received at performing lab >48 hours after collection.  
**NOTE:** Specimens are accepted at HML Monday-Thursday.(HML: Contact IFC Laboratory prior to sending specimen. Provide diagnosis, WBC and leukocyte differential with specimen.)

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**Histoplasma Antibodies by CF & ID, Serum****Panel Code: HST**

Histoplasma mycelia  
Histoplasma precipitin  
Histoplasma yeast

**CPT Codes(s):** 86698 x3  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri Sun

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.25 mL. Specimen must be centrifuged and aliquoted within 2 hours of collection.  
**UNACCEPTABLE:** Contaminated or severely lipemic specimens.  
**NOTE:** Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent."  
Recommend testing in conjunction with Histoplasma Antigen by EIA, Serum and Histoplasma Galactomannan Antigen Quantitative by EIA, Urine.

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**Histoplasma Antigen Quantitative by EIA, Serum****Panel Code: LAB3159****CPT Codes(s):** 87385**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top-1 mL Serum in Sterile Screw-top Tube

SUBMIT: 2 mL serum in sterile ARUP Standard Transport Tube REFRIGERATED. Minimum volume 1 mL.

UNACCEPTABLE: Specimens other than serum. Room Temperature specimen.

NOTE: Recommend testing in conjunction with Histoplasma Antibodies by CF &amp; ID, Serum and Histoplasma Galactomannan Antigen Quantitative by EIA, Urine.

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**Histoplasma Galactomannan Antigen Quantitative  
by EIA, Urine****Panel Code: LAB3008****CPT Codes(s):** 87385**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a screw-top container

SUBMIT: 2 mL urine REFRIGERATED.

UNACCEPTABLE: Specimen in preservative. Room Temperature specimen.

NOTE: Recommend testing in conjunction with Histoplasma Antibodies by CF &amp; ID, Serum and Histoplasma Antigen by EIA, Serum.





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**HIV Antigen/Antibody Diagnostic Cascade****Panel Code: HVD****CPT Codes(s):** 87389**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: The testing algorithm begins with the Abbott HIV-1/2 AG/AB screening immunoassay that simultaneously detects both antibody to human immunodeficiency virus (HIV) and HIV p24 antigen on the Abbott Architect instrument. The performance of this assay has not been established for individuals younger than 2 yr. of age. Nearly all infants born to HIV infected mothers passively acquire maternal antibody and test antibody positive until 18 mo. of age regardless of infection status. If results are repeatedly reactive, then HIV-1 and HIV-2 antibody differentiation using the HIV Geenius (BioRad) HIV-1/2 immunoassay (86701,86702) will be performed and charged. If the differentiation assay is also reactive, the presence of HIV-1 or HIV-2 antibodies is established. Specimens non-reactive with the HIV Geenius are reported as indeterminate and further testing with a qualitative or quantitative nucleic acid amplification test (NAT) should be performed to identify or rule out acute HIV-1 infection\*

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**HIV Antigen/Antibody Screening Cascade****Panel Code: HIV****CPT Codes(s):** G0475**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: The testing algorithm begins with the Abbott HIV-1/2 AG/AB screening immunoassay that simultaneously detects both antibody to human immunodeficiency virus (HIV) and HIV p24 antigen on the Abbott Architect instrument. The performance of this assay has not been established for individuals younger than 2 yr. of age. Nearly all infants born to HIV infected mothers passively acquire maternal antibody and test antibody positive until 18 mo. of age regardless of infection status. If results are repeatedly reactive, then HIV-1 and HIV-2 antibody differentiation using the HIV Geenius (BioRad) HIV-1/2 immunoassay (86701,86702) will be performed and charged. If the differentiation assay is also reactive, the presence of HIV-1 or HIV-2 antibodies is established. Specimens non-reactive with the HIV Geenius are reported as indeterminate and further testing with a qualitative or quantitative nucleic acid amplification test (NAT) should be performed to identify or rule out acute HIV-1 infection\*

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**HIV-1 RNA Quantitation****Panel Code: LAB3032****CPT Codes(s):** 87536**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** 2 times per week**Specimen:**

COLLECT: LavX2,Plasma,Min1.2mL

SUBMIT: 2.0 mL EDTA plasma FROZEN in a separate tube. Minimum volume 1.2 mL. May require ABN form.

UNACCEPTABLE: Heparinized and serum specimens.

NOTE: Aliquoted specimen stable Refrigerated up to 5 days, Freeze if &gt;5 days.

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**HLA B27 Typing****Panel Code: B27****CPT Codes(s):** 81374**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon - Fri**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood ROOM TEMPERATURE in original tubes. Minimum volume 2 mL.

UNACCEPTABLE: Specimen clotted, centrifuged, refrigerated or frozen.

NOTE: Whole blood, do not process.

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**HLA DQB1 for Celiac Disease****Panel Code: LAB3160****CPT Codes(s):** 81376 X2**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Lav Top (Whole Blood)

SUBMIT: 4 mL whole blood ROOM TEMPERATURE in original tubes. Minimum volume 0.5 mL.

NOTE: Whole blood; do not process.

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**Homocysteine****Panel Code: HOM****CPT Codes(s):** 83090**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Lavender Top on Wet Ice (Fasting)

SUBMIT: 0.5 mL plasma separated within 6 hours REFRIGERATED up to 14 days.

NOTE: Patient fasting 8 hours minimum. MUST keep lavender top on ice until centrifuged.



**Homovanillic Acid/Vanillylmandelic Acid, Urine****Panel Code: VHA****CPT Codes(s):** 83150, 84585**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon- Fri**Specimen:****COLLECT:** Urine (No Preservative)**SUBMIT:** 5 mL aliquot of random urine or 24 hour collection (no preservative)  
REFRIGERATED. Minimum volume 2 mL.**UNACCEPTABLE:** Use of preservative. Insufficient amount of urine on the filter paper for infants.**NOTE:** Alternate specimen for infants: Filter paper urine collection kit (obtain from laboratory)  
ROOM TEMPERATURE. Drugs such as L-dopa, dopamine, epinephrine and norepinephrine are metabolized to HVA and VMA and will fictitiously elevate their levels in the urine. Therefore, the patient should not be on such drugs when collecting the urine. Useful for diagnosis and monitoring treatment of neuroblastoma and pheochromocytoma. The combination of HVA and VMA will give the positive diagnosis in 92% of cases of neuroblastoma. More than 90% of patients with pheochromocytoma will have an elevated VMA. If both VMA and metanephrines are tested, >98% of patients with pheochromocytomas will be detected.**HPV HIGH RISK DNA CERVICAL****Panel Code: HPP****CPT Codes(s):** 87624**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:****Specimen:****COLLECT:** SurePath Collection Vial**SUBMIT:** SurePath collection vial at ROOM TEMPERATURE. **UNACCEPTABLE:** Sample more than 14 days old when received for HPV testing.**NOTE:** Deliver to lab within 14 days of collection.

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**HSV 1 & 2 Qualitative DNA by PCR****Panel Code: HPC****CPT Codes(s):** 87529x2**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Three times each week Mon-Fri**Specimen:**

COLLECT: FLOCKED SWAB IN UTM (RED CAP)

SUBMIT: Flocked swab in Universal Viral Transport Medium (eye, mouth, nasal, throat, genital, or skin/dermal) REFRIGERATED.

UNACCEPTABLE: CSF, tissue, feces, heparinized specimens or wound dressings. Eswabs are not acceptable.

NOTE: Specimen source is REQUIRED. Alternate specimen: Fluid from at least six vesicles placed in Universal Transport Medium OR 1 mL serum from Plain Red Top or plasma from Lavender Top (EDTA) or bronchoalveolar lavage (BAL) REFRIGERATED.

Minimum volume 0.5 mL.

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**HSV 1 & 2 Qualitative DNA by PCR, CSF****Panel Code: LAB3078****CPT Codes(s):** 87529**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Container, Min Volume: 0.5 mL

SUBMIT: 1 mL Cerebrospinal Fluid (CSF) FROZEN. Minimum volume 0.5 mL.

UNACCEPTABLE: Specimens other than CSF.

NOTE: DO NOT centrifuge. Specimen stable Refrigerated up to 7 days.

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**HTLV-I/II Antibody Cascade****Panel Code: TLV****CPT Codes(s):** 86790**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN in a separate tube.

UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimen.

NOTE: If the HTLV-I/II is repeatedly reactive, then confirmatory testing (CPT: 86689) will be performed at an additional charge.



**Hypersensitivity Pneumonitis I****Panel Code: FLG**

Aspergillus fumigatus #1 and #6, Antibody  
Aspergillus pullans Antibody  
Micropolyspora faeni Antibody  
Pigeon Serum Antibody  
Thermoactinomyces vulgaris Antibody

**CPT Codes(s):** 86606 x2/ 86331 x4

**Test Performed at:** ARUP LABS

**Analytic Time:** 120 hours (5 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot within 2 hours of collection.

**UNACCEPTABLE:** Plasma

**IgE Allergen Panel Childhood March with Total IgE****Panel Code: R01**

Alternaria Alternata  
Cat Dander  
Cladosporium herbarum  
Cockroach  
Codfish  
D.farinae  
D.pteronyssinus  
Dog Dander  
Egg White  
Milk, Cow  
Mouse urine  
Peanut  
Shrimp  
Soybean  
Total IgE  
Walnut  
Wheat

**CPT Codes(s):** 86003 x 16 /82785 x1

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.



**IgE Allergen Panel Food With Total IgE****Panel Code: FOO**

Almond  
Cashew  
Codfish  
Egg White  
Hazelnut  
Milk, Cow  
Peanut  
Salmon  
Scallop  
Sesame Seed  
Shrimp  
Soybean  
Tuna  
Walnut  
Wheat

**CPT Codes(s):** 86003 x15 / 82785 x1

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days. Pediatric minimum volume is 0.6 mL.

**IgE Allergen Panel Midwest 7****Panel Code: MW7**

Alternaria alternata  
Cat dander  
Cladosporium herbarum  
Common Ragweed (Short)  
D.Farinae  
Dog Dander  
House Dust, Greer Labs

**CPT Codes(s):** 86003 x7

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.



**IgE Allergen Panel Midwest Large****Panel Code: MWL**

Alternaria alternata  
Caldosporium herbarum  
Cat Dander  
Cocksfoot (Orchard Grass)  
Common Ragweed (short)  
Cottonwood  
D.farinae  
Dandelion  
Dog Dander  
Elm  
Giant Ragweed  
House Dust, Greer Labs  
Maple, Box-elder  
Meadow Fescue  
Meadowgrass, Kentucky Blue  
Mountain Juniper (Cedar)  
Olive Tree  
Rye Grass  
Saltwort, R.Thistle  
Timothy Grass

**CPT Codes(s):** 86003 x20

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.



**IgE Allergen Panel Mini****Panel Code: MIN**

Alternaria alternata  
Cat Dander  
Common Ragweed (Short)  
D.farinae  
Dog Dander  
Giant Ragweed  
House Dust/Hollister-Stier  
Maple, Box-elder  
Meadowgrass, Kentucky Blue  
Oak  
Red Top Grass

**CPT Codes(s):** 86003 x11

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.

**IgE Allergen Panel Nut Food****Panel Code: NUT**

Almond  
Brazil Nut  
Cashew  
Chestnut  
Hazelnut  
Pecan  
Pistachio  
Walnut

**CPT Codes(s):** 86003 x8

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.





**IgE Allergen Panel Regular****Panel Code: REG**

Alternaria alternata  
Aspergillus fumigatus  
Cat Dander  
Cladosporium herbarum  
Cocksfoot (Orchard Grass)  
Common Ragweed (Short)  
D.farinae  
Dog Dander  
Elm  
English Plantain  
Giant Ragweed  
House Dust/Hollister-Stier  
Maple, Box-elder  
Meadowgrass, Kentucky Blue  
Oak  
Timothy Grass

**CPT Codes(s):** 86003 x16

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 48 hours (2 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.



**IgE Allergen Panel Respiratory with Total IgE****Panel Code: R02**

Alternaria alternata  
Aspergillus fumigatus  
Bermuda Grass  
Cat Dander  
Cedar, Mountain  
Cladosporium herbarum  
Cockroach  
Common Ragweed (Short)  
Common Silver Birch  
Cottonwood  
D.farinae  
D.pteronysinus  
Dog Dander  
Elm  
Maple, Box-elder  
Marsh Elder, Rough  
Mouse Urine  
Mulberry  
Nettle  
Oak  
Penicillium Notatum  
Salwort, Russian Thistle  
Timothy Grass  
Total IgE  
White Ash

**CPT Codes(s):** 86003 x24 / 82785 x1

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days. Pediatric minimum volume is 0.75 mL.



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**IgE Allergen Seafood Panel****Panel Code: FO1**

Clam  
Lobster  
Salmon  
Scallop  
Shrimp  
Tuna

**CPT Codes(s):** 86003 x6**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 3.0 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.

---

**IGE Single Allergen****Panel Code: ALG****CPT Codes(s):** 86003 or 86008**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 Days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.1 mL serum, per allergen requested, REFRIGERATED; frozen if not submitted within 7 days.

NOTE: See section "IgE Single Allergens" for list of available allergens with panel codes.

CPT:86003 or 86008 times the number of allergens requested. Order Allergen specific panel.

If test is performed at HealthEast Medical Laboratory the analytical time is 48 hours.

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**IgG Subclasses****Panel Code: SUB**

Subclasses 1,2,3 and 4  
Total Immunoglobulin G

**CPT Codes(s):** 82784, 82787 x4**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.



**Imipramine (Tofranil®) and Desipramine****Panel Code: LAB3045**

## Desipramine

CPT Codes(s): 80335 x1

Test Performed at: Mayo Medical Laboratories

Analytic Time: 96 hours (4 days)

Days Test Performed: Mon Tue Wed Thu Fri Sat

**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Remove serum from cells within 2 hours.

UNACCEPTABLE: Specimen drawn in an SST® tube, markedly hemolyzed or lipemic or icteric.

NOTE: Recommended collection is prior to next dose (trough).

**Immunofixation Electrophoresis, Serum****Panel Code: IFE**

CPT Codes(s): 86334

Test Performed at: HealthEast Medical Laboratory

Analytic Time: 48 hours (2 days)

Days Test Performed: Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

NOTE: A separate charge for the pathologist's interpretation is billed using CPT 86334 with a 26 modifier.

**Immunofixation Electrophoresis, Urine****Panel Code: IFU**

CPT Codes(s): 86335

Test Performed at: HealthEast Medical Laboratory

Analytic Time: 48 hours (2 days)

Days Test Performed: Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Random Urine-Min 25mL

SUBMIT: 25 mL aliquot of random urine or 24 hour collection (no preservative)  
REFRIGERATED.

NOTE: Timed collection (no preservative) is also acceptable. A separate charge for the pathologist's interpretation is billed using CPT 86335 with a 26 modifier.



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**Immunoglobulin E****Panel Code: TIG****CPT Codes(s):** 82785**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Tue Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 1 week.

---

**Immunoglobulin A****Panel Code: IGA****CPT Codes(s):** 82784**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. Pediatric minimum volume is 130 uL.

---

**Immunoglobulin G****Panel Code: IGG****CPT Codes(s):** 82784**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

---

**Immunoglobulin M****Panel Code: IGM****CPT Codes(s):** 82784**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.



**Immunoglobulin Total Light Chains, Urine****Panel Code: LIT**

Kappa Light Chains  
Kappa/Lambda TLC Ratio, calculated  
Lambda Light Chains

**CPT Codes(s):** 83883 x2

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon Tue Wed Thu Fri Sat

**Specimen:**

**COLLECT:** Urine in a Scew-Top Container

**SUBMIT:** 10 mL aliquot of 24 hour collection (no preservative) OR random urine (no preservative) REFRIGERATED.

**Immunoglobulins, Quantitative****Panel Code: IGO**

IgA  
IgG  
IgM

**CPT Codes(s):** 82784 x3

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top

**SUBMIT:** 1 mL serum REFRIGERATED

**UNACCEPTABLE:** Markedly hemolyzed specimens.

**Inflammatory Bowel Disease Differentiation Panel****Panel Code: IBD**

ASCA IgA & IgG  
Neutrophil Specific Antibody

**CPT Codes(s):** 86671 x2 / 86255

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 1.5 mL serum REFRIGERATED. Minimum volume 0.6 mL. Centrifuge and aliquot within 2 hours of collection.

**UNACCEPTABLE:** Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens. Avoid repeated freeze/thaw cycles.



---

**Influenza A/B Rapid Test****Panel Code: FAB**

**CPT Codes(s):** 87804, 87400 x2  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 2 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** NP Wash or Eswab  
**SUBMIT:** NP wash in sterile screw-top container or NP swab in minitip Eswab or viral transport media.  
**UNACCEPTABLE:** All swabs in non-liquid media. Throat swabs. Specimens more than 72 hours old.

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**Influenza Virus A Antibodies, IgG and IgM****Panel Code: FLA**

**CPT Codes(s):** 86710 x2  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 72 hours (3 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Markedly hemolyzed or lipemic specimens.

---

**Influenza Virus B Antibodies, IgG and IgM****Panel Code: FUB**

**CPT Codes(s):** 86710 x2  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 72 hours (3 days)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Markedly hemolyzed or lipemic specimens.

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**Inhibin A and B, Tumor Marker****Panel Code: IAB**

**CPT Codes(s):** 83520, 86336  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 192 hours (8 days)  
**Days Test Performed:** Tue

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1.0 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Markedly hemolyzed specimen.

---



**INR****Panel Code: INR****CPT Codes(s):** 85610**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Blue Top

SUBMIT: 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 24 hours of collection. Platelet-free plasma FROZEN within 24 hours of collection is stable for up to 2 weeks.

UNACCEPTABLE: Refrigerated or frozen whole blood specimen, partially filled tube, marked hemolysis, clotted specimen, whole blood received &gt;24 hours of collection or platelet-free plasma not frozen within 24 hours of collection.

NOTE: See the specimen collection section of this manual for preparation of platelet-free plasma.

**Insulin Level****Panel Code: ISL****CPT Codes(s):** 83525**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1.25 mL serum FROZEN. Minimum volume 0.2 mL.

UNACCEPTABLE: Hemolysis

NOTE: Recommend fasting specimen. Insulin autoantibodies in human serum may interfere and cause discordant results.

**Insulin Like Growth Factor 1 (IGF1)****Panel Code: LAB3056****CPT Codes(s):** 84305**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Tues and Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Gross hemolysis or lipemia. Clotted sample. Samples not separated from cells within 2 hours of collection.





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**Insulin-Like Growth Factor Binding Protein-3****Panel Code: BP3****CPT Codes(s):** 82397**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.4 mL serum FROZEN. Minimum volume 0.1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Samples not separated from cells within 2 hours of collection.

NOTE:

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**Intrinsic Factor Blocking Antibody****Panel Code: IFB****CPT Codes(s):** 86340**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum FROZEN. Minimum volume 0.15 mL.

UNACCEPTABLE: Grossly hemolyzed or severely lipemic specimens.

NOTE: After separation from cells, Serum is stable at Room Temperature 8 hours, Refrigerated 48 hours, Frozen 1 month.

---

**Iron****Panel Code: FE****CPT Codes(s):** 83540**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Iron containing supplements should be avoided for 24 hours prior to draw.



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**Iron and Transferrin Iron Binding Capacity****Panel Code: ITS**

Iron, serum  
Transferrin IBC, calculated  
Transferrin Saturation, calculated  
Transferrin, serum

**CPT Codes(s):** 83540, 84466

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top/ OP Red Top

**SUBMIT:** 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 3 days. May require ABN form.

**UNACCEPTABLE:** Hemolyzed specimen.

**NOTE:** Iron containing supplements should be avoided for 24 hours prior to draw.

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**JAK2 MUTATION NGS ANALYSIS****Panel Code: JAK**

**CPT Codes(s):** 81403

**Test Performed at:** FAIRVIEW LABORATORY

**Analytic Time:** 336 hours (14 days)

**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** Yellow ACD SOLN A

**SUBMIT:** 10 mL Whole Blood or 3 mL Bone Marrow ROOM TEMPERATURE. Minimum volume 3 mL Whole Blood or 1 mL Bone Marrow. Specimen must arrive at testing lab within 120 hours of collection.

**UNACCEPTABLE:** Whole blood: frozen or clotted specimen, incorrect anticoagulant, specimen more than 5 days old. Shared blood or bone marrow samples will not be accepted.

Contamination will occur on automated hematology analyzers.

**NOTE:** Specimen Source and Clinical Indications for Testing are REQUIRED. Do not refrigerate or freeze. Alternate specimen: Lavender Top (EDTA). Bone marrow clot is acceptable for testing.

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**JO-1 Auto Antibodies****Panel Code: EJO**

**CPT Codes(s):** 86235

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Tue

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

**UNACCEPTABLE:** Specimens > 5 days old if not frozen. Body fluids are unacceptable.

**NOTE:** Serum may be stored up to 2 days at room temperature.

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**Joint Fluid Exam****Panel Code: JFE**

Cell Count and Differential  
Crystal Exam  
Glucose  
Protein

**CPT Codes(s):** 82945, 84157, 89051, 89060

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top (no additive), Lavender Top, Sterile Containers

**SUBMIT:** 2 mL in plain red top, 3 mL in lavender top, and sterile screw-top tubes

**REFRIGERATED.**

**UNACCEPTABLE:** Specimen > 24 hours old. Sodium Heparin tubes, Lithium Heparin tubes, or Gel tubes.

**NOTE:** Specimen source is REQUIRED.

**Kappa/Lambda Quantitative Free Light Chains and Ratio, Serum****Panel Code: LCS**

Kappa Free Light Chains  
Kappa/Lambda FLC Ratio, calculated  
Lambda Free Light Chains

**CPT Codes(s):** 83883 x2

**Test Performed at:** FAIRVIEW LABORATORY

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon, Wed, Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 0.5 mL serum REFRIGERATED. Minimum volume 0.3 mL.

**UNACCEPTABLE:** Plasma specimens.

**NOTE:** Centrifuge and remove serum from cells ASAP.

**Kleihauer-Betke Stain****Panel Code: KLB**

**CPT Codes(s):** 85460

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 3 mL whole blood REFRIGERATED. Specimen must arrive within 24 hours of collection.

**UNACCEPTABLE:** Volume less than 1 mL. Specimen > 24 hours old.

**NOTE:** This test will be performed only if the fetal blood screen (FBS) is positive, with the exception of a test needed on a Rh positive mother.



**KOH Prep****Panel Code: KOH****CPT Codes(s):** 87220**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Swab in CultureSwab™ OR hair, skin, nails, fluid, sputum, or tissue in sterile screw-top container OR fluid in Port-a-Cul™ vial, OR needleless capped syringe  
REFRIGERATED.

UNACCEPTABLE: Dry swab.

NOTE: Specimen source is REQUIRED.

**Lacosamide (Vimpat®)****Panel Code: VIM**

Desmethyllacosamide

**CPT Codes(s):** 80235**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1.0 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are most reproducible.

**Lamellar Body Count, Amnio****Panel Code: LAB3017****CPT Codes(s):** 83664**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Amniotic Fluid (tap only) in a Screw-Top Container

SUBMIT: 6 mL amniotic fluid REFRIGERATED in a screw-top container. Do not centrifuge.  
Ship unprocessed amniotic fluid on wet ice. Must arrive at U of M within 24 hours of collection.

UNACCEPTABLE: Clotted specimen or vaginal pool. Frozen or centrifuged. Gross hemolysis, meconium or mucus contamination.

NOTE: A minimum of 0.5 mL amniotic fluid is required.



**Lamotrigine (Lamictal ®)****Panel Code: LMO**

**CPT Codes(s):** 80175  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Plain Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Serum or plasma separator tubes. Grossly hemolyzed specimens.  
**NOTE:** Preferred specimen is pre-dose (trough) draw - at steady state concentration. Alternate specimen: Plasma from Lavender Top (EDTA) or Green Top (lithium or sodium heparin).

**LD (LDH), Body Fluid****Panel Code: LDF**

**CPT Codes(s):** 83615  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Body Fluid in a Screw-Top Container  
**SUBMIT:** 1 mL body fluid REFRIGERATED up to 4 days.  
**NOTE:** Specimen source is REQUIRED.

**LD(LDH)****Panel Code: LD**

**CPT Codes(s):** 83615  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED up to 4 days.  
**UNACCEPTABLE:** Hemolyzed specimen.  
**NOTE:** Centrifuge and separate serum from cells within 4 hours.



**LDL Cholesterol, Direct****Panel Code: LDD****CPT Codes(s):** 83721**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 5 days. May require an ABN form.

NOTE: Centrifuge and separate serum from cells within 3 hours.

**Lead Blood****Panel Code: PB****CPT Codes(s):** 83655**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Metal free Navy Blue Top-EDTA-Whole Blood

SUBMIT: 1 mL whole blood REFRIGERATED. Preferred vacutainer tubes are Navy-Blue

Top-EDTA or Tan Top-(Lead only)-EDTA for all VENOUSLY drawn specimens.

Lavender-EDTA MICROTAINER tube is acceptable for CAPILLARY fingerstick only.

UNACCEPTABLE: Specimens collected in tubes other than Navy-Blue Top-EDTA or Tan

Top-EDTA on venous draws. Specimens collected in tubes other than Lavender

Microtainer on capillary draws. Serum. Heparinized or clotted specimens.

NOTE: A lavender MICROTAINER® (capillary fingerstick) can be substituted for use in young children (microtainer must be filled 1/2 full) If lead is  $\geq 5$  ug/dL on a MICROTAINER® specimen, the patient must be drawn by VENIPUNCTURE and analysis repeated.

Patient's address (street address, city, state, and zip code), race, and ethnicity are

REQUIRED. See Special Instructions "LEAD Screening Recommendation by CDC".

**Legionella Antigen, Urine****Panel Code: LUA****CPT Codes(s):** 87899**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 2 mL urine REFRIGERATED in a sterile screw-top container. Do NOT centrifuge.

UNACCEPTABLE: Specimen in preservative. Specimen at ROOM TEMP &gt;24 hrs.



**Legionella pneumophila Antibodies, Total****Panel Code: LEG****CPT Codes(s):** 86713**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimen.

NOTE: Paired specimens, both acute and convalescent sera ( $\geq 21$  days after onset of fever), are strongly recommended.**Legionella Species by Qualitative PCR****Panel Code: LCR****CPT Codes(s):** 87541/87798**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Container

SUBMIT: 2 mL respiratory specimen [bronchoalveolar lavage (BAL), sputum, tracheal aspirate, or pleural fluid] in a sterile screw-top container (minimum volume 0.5 mL) OR nasopharyngeal swab or bronchial brushings in ARUP viral transport media FROZEN.

NOTE: Specimen source required. Fluid is also acceptable in viral transport media. Specimen stable Ambient 24 hours, Refrigerated 5 days, Frozen 6 months.

**Levetiracetam****Panel Code: LVT****CPT Codes(s):** 80177**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are preferred, as they are the most consistent for therapeutic drug monitoring.



**LH****Panel Code: LH**

**CPT Codes(s):** 83002  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**  
COLLECT: Red Top  
SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

**Lidocaine (Xylocaine®)****Panel Code: LID**

**CPT Codes(s):** 80176  
**Test Performed at:** MEDTOX (MTO)  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**  
COLLECT: Plain Red Top  
SUBMIT: 1 mL serum REFRIGERATED.  
UNACCEPTABLE: Specimen drawn in an SST® tube.  
NOTE: Trough levels are most reproducible.

**Lipase****Panel Code: LPS**

**CPT Codes(s):** 83690  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**  
COLLECT: IP Green Top/ OP Red Top  
SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

**Lipase, Body Fluid****Panel Code: LAB3136**

**CPT Codes(s):** 83690  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**  
COLLECT: Body Fluid in a Screw-Top Container  
SUBMIT: 1.25 mL body fluid (Peritoneal or Pleural) REFRIGERATED. Minimum volume 0.2 mL.  
UNACCEPTABLE:  
NOTE: Specimen source is REQUIRED. Centrifuge & aliquot to remove cellular material.





**Lipid Cascade****Panel Code: L01**

Cholesterol, Total  
HDL Cholesterol  
LDL Cholesterol, calculated  
Triglycerides

**CPT Codes(s):** 80061

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top (Fasting)

**SUBMIT:** 1 mL serum REFRIGERATED up to 5 days. May require ABN form.

**UNACCEPTABLE:** Specimen more than 5 days old or markedly hemolyzed.

**NOTE:** Patient fasting 12-14 hours. Centrifuge and separate serum from cells within 3 hours. If the triglyceride is 401-1100 mg/dL a direct LDL cholesterol will be performed and charged separately using CPT 83721.

**Lipid Profile****Panel Code: LIP**

Cholesterol, Total  
HDL Cholesterol  
LDL Cholesterol, calculated  
Triglycerides

**CPT Codes(s):** 80061

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green / OP Red Top (Fasting)

**SUBMIT:** 1 mL serum REFRIGERATED. May require ABN form. Pediatric minimum volume is 116 uL.

**UNACCEPTABLE:** Markedly hemolyzed specimen.

**NOTE:** Patient fasting 12-14 hours.



**LipoFit by NMR****Panel Code: LAB3060**

**CPT Codes(s):** 80061, 83704  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 144 hours (6 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** PlainRed-Fast-4mLSerum  
**SUBMIT:** 4 mL serum REFRIGERATED. Minimum volume 2 mL.  
**UNACCEPTABLE:** Plasma, frozen specimen, sample collected in Serum Separator Tube, non-fasting or lipemic specimen.  
**NOTE:** 12 hour fasting is REQUIRED. Allow to clot at room temperature. Separate serum from cells within 8 hours.  
Use in appropriate high-risk patients (eg, type 2 diabetes mellitus) in whom LDL particle number is being used to guide therapy. Not recommended for cardiovascular disease risk assessment in most individuals.

**Lipoprotein (a)****Panel Code: LPA**

**CPT Codes(s):** 83695  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Serum Separator Tube  
**SUBMIT:** 1.0 mL serum FROZEN. Minimum volume 0.5 mL.  
**UNACCEPTABLE:** Body Fluids  
**NOTE:** Separate from cells ASAP or within 2 hours of collection. Alternative specimen: Plasma from Green Top (Lithium Heparin) or Lavender Top (EDTA). Allow specimen to clot completely at room temperature.

**Lithium****Panel Code: LI**

**CPT Codes(s):** 80178  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED up to 7 days. Remove serum from cells within 4 hours.  
May require ABN form.  
**NOTE:** Recommended draw time is 12 hours post dose.



**Liver-Kidney Microsome - 1 Antibody, IgG****Panel Code: LKM****CPT Codes(s):** 86376**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Tue Thu Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Specimen must be centrifuged and aliquoted within 2 hours of collection.

UNACCEPTABLE: Contaminated, heat-inactivated, hemolyzed, or lipemic specimens.

**Lupus Anticoagulant Panel****Panel Code: LLA****CPT Codes(s):** 85730**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon - Fri**Specimen:**

COLLECT: BLUx4PltPrPlsmaFZw/4hr

SUBMIT: 4 mL platelet poor plasma from Blue Top (Citrate) tubes FROZEN immediately (1 mL/aliquot tube). Minimum collection of 1 Blue Top tube, processed for platelet poor plasma.

UNACCEPTABLE: Underfilled or overfilled collection tube, clotted specimen, frozen whole blood specimen, whole blood received &gt;4 hours after collection, or platelet-free plasma not frozen within 4 hours of collection.

NOTE: Recommend testing when patient is not on anticoagulants. Interfering medications include apixaban, argatroban, bivalirudin, dabigatran, fondaparinux, rivaroxaban, & edoxaban. To obtain Platelet Poor Plasma: Centrifuge specimens for 30 minutes at 3000 rpm. Aliquot plasma (1 mL into each tube) and freeze. If there is limited platelet poor plasma (~1 mL), then aliquot it into 2 tubes. Whole blood Blue Top tubes may be sent at ROOM TEMPERATURE if they will arrive at Fairview/UMMC within 4 hours of collection. The following will always be performed: INR, PTT, Thrombin Time and DRVVT Screen. Additional tests may be performed and charged separately including Heparin Neutralization (CPT Code 85525), DRVVT Screen (CPT 85613), DRVVT Confirmation (CPT Code 85613), DRVVT Mix (CPT Code 85613), PTT-LA Mix (CPT Code 85732), & Platelet Neutralization (CPT Code 85597).



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**Lyme Antibody Cascade****Panel Code: LYC****CPT Codes(s):** 86618**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Plain Red top

SUBMIT: 2 mL serum REFRIGERATED up to 5 days.

NOTE: If total Lyme antibody is &gt;0.90, then Lyme Confirmation (CPT86617x2) will be performed at an added charge.

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**Lyme Antibody Disease, Total****Panel Code: LYM****CPT Codes(s):** 86618**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 5 days.

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**Lyme Disease Antibody Confirmation****Panel Code: CFL****CPT Codes(s):** 86617 x2**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED for up to 5 days. If stored for greater than 5 days, FREEZE.

UNACCEPTABLE: Markedly hemolyzed or icteric specimen.

NOTE: This is a confirmatory test for patients with positive Lyme Antibody screening test (EIA or IFA). Testing includes IgG and IgM by Line Blot (Western blot). Due to the seasonality of this test, testing will be performed on fewer days per week in the winter months.

\* Days performed varies.

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**Macroglobulins****Panel Code: VSC****CPT Codes(s):** 85810**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon - Fri**Specimen:**

COLLECT: Red Top (1.1 serum)

SUBMIT: 2.2 mL serum REFRIGERATED. Minimum volume 1.1 mL.



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**Magnesium****Panel Code: MG****CPT Codes(s):** 83735**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

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**Magnesium, 24 hour Urine****Panel Code: MGU****CPT Codes(s):** 83735**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine/pH 1.5-2.0 (HCL)

SUBMIT: Entire 24 hour urine collection bottle(no preservative) kept REFRIGERATED during collection and transport. 24 hour collection acidified with 6NHCL to pH 1.5-2.0 on receipt at HML (use 10 mL of HCl per 1000-2000 mL of urine)

NOTE:Total volume (ml) REQUIRED.

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**Magnesium, Random Urine****Panel Code: UMG****CPT Codes(s):** 83735**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine/pH 1.5-2.0 (HCL)

SUBMIT: Random urine collection in screw-top container (entire cup).REFRIGERATE within 4 hours of collection. Acidify entire random collection (cup) with 6N HCL to pH 1.5-2.0 after receipt at HML.



**Magnesium, Red Blood Cell****Panel Code: RMG****CPT Codes(s):** 83735**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Navy Blue EDTA-PL&amp;RB-2 Metal-Free Tubes

SUBMIT: 1 mL packed RBC's and 1 mL plasma in 2 metal-free aliquot tubes REFRIGERATED.

UNACCEPTABLE: Both RBC's and plasma not received, mildly hemolyzed plasma..

NOTE: \* Days performed varies. Within 2 hours of collection, centrifuge Navy-Blue Lavender Banded collection tube. Transfer plasma to a metal-free aliquot tube. Transfer at least 1 mL packed RBC's to a second metal-free transfer tube. Submit both.

**Malaria Smear, Blood****Panel Code: MAL****CPT Codes(s):** 87015, 87207**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 5 mL whole blood ROOM TEMPERATURE received within 24 hours of collection OR slides from referring lab for parasite confirmation ROOM TEMPERATURE.

UNACCEPTABLE: Lavender Top more than 24 hours old.

NOTE: Patient should be drawn just before temp spike. Indicate travel history or past infection. Positive results will be reported to MDH.

**Manganese, RBC****Panel Code: LAB3118****CPT Codes(s):** 83785**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Cent-Packed RBCs

SUBMIT: 1 mL packed RBCs REFRIGERATED in the original navy blue top-EDTA tube. Minimum volume 0.4 mL.

NOTE: Separate cells (centrifuge tube and discard plasma) ASAP or within 2 hours of collection. Useful as a reasonable indicator of recent, active exposure and provides a modest indicator for distinguishing exposed from non-exposed individuals. May be useful in long-term, low-dose manganese exposure. Not recommended for monitoring potential accumulation with TPN, refer to Manganese, Whole Blood (LAB3125).



**Manganese, Whole Blood****Panel Code: LAB3125****CPT Codes(s):** 83785**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: NAVY BLUE TOP-EDTA (LAV BAND)

SUBMIT: 7 mL whole blood ROOM TEMPERATURE in original tube. Minimum volume 0.5 mL.

UNACCEPTABLE: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens. Frozen specimens.

**Marijuana Metabolite, Umbilical Cord Tissue, Qualitative****Panel Code: LAB3155****\*\* AVAILABILITY:** St. John's & Woodwinds Hospital Inpatient Only \*\***CPT Codes(s):** No CPTs**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: ARUP Security Kit

SUBMIT: At least 8 inches of Umbilical Cord in ARUP Security Kit for Meconium/Umbilical Drug Detection REFRIGERATED.

UNACCEPTABLE: Cord soaking in blood or other fluid. Formalin fixed. Tissue that is obviously decomposed.

NOTE: Drain and discard any blood by gently squeezing cord segment between thumb and forefinger once. Rinse the exterior of the cord segment with tap water, sterile water, or normal saline. Pat the cord dry and transport at least 8 inches of umbilical cord in an ARUP Security Kit for Meconium/Umbilical Drug Detection. Used to detect in utero exposure to cannabis (marijuana) in neonates, consistent with maternal use during approximately the last trimester of pregnancy. Meconium specimen testing is more sensitive and definitive than umbilical cord tissue for cannabis use. If both the Drug Detection Panel &amp; Marijuana Metabolite tests are ordered, then a minimum of an 8 inch continuous length of umbilical cord may be submitted for both tests.



**Maternal Serum Screen, Alpha Fetoprotein****Panel Code: SGL****CPT Codes(s):** 82105**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top (gestational age: 14-24 wks, 6 days)

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed specimens. Plasma. Incorrect gestational age.

NOTE: Specimen must be drawn between 14 weeks, 0 days and 24 weeks, 6 days gestation.

Serum stability after separation from cells: Ambient 72 hours, Refrigerated 2 weeks,

Frozen 1 year (Avoid repeated freeze/thaw cycles.) Complete and submit a Maternal AFP form found in the front section of the manual. This test is for neural tube defects only.

**Maternal Serum Screen, Alpha Fetoprotein, hCG, Estriol, and Inhibin A (Quad)****Panel Code: QD**

AFP

DIA (Dimeric Inhibin A)

hCG

uE3 (unconjugated Estriol)

**CPT Codes(s):** 81511**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top (gestation age 14-24 wks, 6 days)

SUBMIT: 3 mL serum REFRIGERATED. Minimum volume 1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed specimens. Plasma. Incorrect gestational age.

NOTE: Specimen must be drawn between 14 weeks, 0 days and 24 weeks, 6 days gestation.

The recommended time for maternal serum screening is 16 to 18 weeks gestation.

Serum stability after separation from cells: Ambient 72 hours, Refrigerated 2 weeks,

Frozen 1 year (Avoid repeated freeze/thaw cycles.) Complete and submit a Maternal AFP form found in the front section of the manual.





**Meperidine and Metabolite Quantitative, Urine****Panel Code: LAB3215**

Meperidine  
Normeperidine

**CPT Codes(s):** 80362

**Test Performed at:** ARUP LABS

**Analytic Time:** 168 hours (7 days)

**Days Test Performed:** Varies

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container

**SUBMIT:** 2 mL aliquot of random urine collection (no preservative). REFRIGERATED. Minimum volume 0.7 mL

**NOTE:** Room temperature and frozen specimen storage is acceptable.

**Mephobarbital****Panel Code: MEP**

Phenobarbital

**CPT Codes(s):** 80345

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 192 hours (8 days)

**Days Test Performed:** Wed

**Specimen:**

**COLLECT:** 1 Plain Red Top

**SUBMIT:** 2 mL serum REFRIGERATED. Separate serum from cells within 2 hours of draw.

**UNACCEPTABLE:** Specimens drawn in an SST® tube or markedly hemolyzed, lipemic or icteric.

**NOTE:** Includes phenobarbital level.

**Mercury, 24 Hour Urine****Panel Code: UHG**

**CPT Codes(s):** 83825

**Test Performed at:** MEDTOX (MTO)

**Analytic Time:** 120 hours (5 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** 24 Hour Metal-free Container

**SUBMIT:** 10 mL aliquot of 24 hour urine collection (metal-free) REFRIGERATED in a metal-free container.

**UNACCEPTABLE:** Specimen not received in a metal-free container.

**NOTE:** Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.



**Mercury, Whole Blood****Panel Code: BHG****CPT Codes(s):** 83825**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Navy-EDTA-WHLBlood

SUBMIT: 3 mL whole blood (navy blue EDTA tube) REFRIGERATED.

UNACCEPTABLE: Specimen clotted or not received in a metal-free tube.

**Metanephrines Fractionated by HPLC-MS/MS,  
Urine****Panel Code: MET**

Metanephrine

Normetanephrine

Total Metanephrines

**CPT Codes(s):** 83835**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 4 mL aliquot (from well mixed 24 hour urine collection) REFRIGERATED during and after collection. Minimum volume 2.5 mL.

UNACCEPTABLE: Room temperature specimen. Specimen preserved with boric acid or acetic acid.

NOTE: "Total volume (mL) and collection time interval (hours or random) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

If possible, abstain from medications for 72 hours prior to collection.

HML may transfer a 4 mL aliquot (Min: 2.5 mL) to an ARUP Standard Transport Tube containing 20 mg sulfamic acid OR adjust pH to 2.0-4.0 with 6M HCl to extend specimen preservation. Specimen stable Refrigerated 2 weeks unpreserved, 1 month preserved.

Alternate specimen: random urine collection. The optimal specimen for this testing is a 24-hour urine collection.

Per-day calculations are not reported for patients younger than 7 years of age and for the following specimen types: a random\*



**Metanephrines, Plasma, Free****Panel Code: PMT**

Metanephrine  
Normetanephrine

**CPT Codes(s):** 83835

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top (Plasma)

**SUBMIT:** 2.0 mL plasma FROZEN. Minimum volume 1.0 mL. Centrifuge and aliquot within 1 hour of collection.

**UNACCEPTABLE:** Plasma separator tubes. Body fluids other than EDTA or heparinized plasma. Non-frozen specimens.

**NOTE:** Drugs and medications may affect results and should be discontinued for at least 72 hours prior to specimen collection, upon the advice of their physician. Collection of the specimen after the patient has rested for 15 minutes in a supine position is recommended. Avoid hemolysis. Alternate specimen: Plasma from Green Top (lithium or sodium heparin). Separate specimens must be submitted when multiple tests are ordered.

**Methadone and Metabolite, Urine, Quantitative****Panel Code: LAB3168**

EDDP  
Methadone

**CPT Codes(s):** 80358

**Test Performed at:** ARUP LABS

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container

**SUBMIT:** 1 mL aliquot of random urine collection (no preservative), Refrigerated (0.5 mL minimum)

**UNACCEPTABLE:** Specimens exposed to repeated freeze/thaw cycles.

**NOTE:** Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.

**Methemoglobin****Panel Code: MHG**

**CPT Codes(s):** 83050

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 1 hours

**Days Test performed:** All

**Specimen:**

**COLLECT:** Syringe (Lithium Heparin) or full green top

**SUBMIT:** 4 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 2 hours on WET ICE (2-8 C).

**NOTE:** Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C).



**Methotrexate (Mexate®)****Panel Code: MTX****CPT Codes(s):** 80299**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top (Protect from Light)

SUBMIT: 0.5 mL serum REFRIGERATED in an amber aliquot tube. Minimum volume 0.1 mL.

UNACCEPTABLE: Specimen collected in SST tube or not protected from light.

NOTE: Protect from light during collection, storage, and shipment. Send STAT when ordered on oncology patient. Alternate specimen: Plasma from Lavender Top (EDTA). HML to add "STAT MTX Must be Decanted" label to specimen before forwarding to FV/UMMC.

**Methylmalonic Acid, Serum or Plasma (Vitamin B12 Status)****Panel Code: MMA****CPT Codes(s):** 83921**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Red Top-Serum(min 0.6mL)

SUBMIT: 1.2 mL serum FROZEN. Minimum volume 0.6 mL.

UNACCEPTABLE: Room temperature specimens. Grossly hemolyzed or lipemic specimens.

NOTE: Serum or plasma must be removed from cells within 2 hours of collection.

**Methylphenidate and Metabolite, Urine, Quantitative****Panel Code: LAB3216**

Methylphenidate

Ritalinic Acid

**CPT Codes(s):** 80360**Test Performed at:** ARUP LABS**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Mon Thu Sat**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 2 mL aliquot of random urine collection (no preservative). REFRIGERATED. Minimum volume 1.0 mL

UNACCEPTABLE: Room temperature specimens.

NOTE:



**Mexiletine (Mexitol®)****Panel Code: MXL****CPT Codes(s):** 80299**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 3 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube or markedly lipemic.

NOTE: Trough specimen recommended.

**Microalbumin, 24 hour Urine****Panel Code: MAU**

Albumin Excretion Rate, calculation

Creatinine, Urine

Microalbumin, Urine

Microalbumin/Creatinine Ratio, calculation

**CPT Codes(s):** 82043, 82570**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

**Microalbumin, Random Urine****Panel Code: UMA**

Creatinine, Urine

Microalbumin, Urine

Microalbumin/Creatinine Ratio, calculation

**CPT Codes(s):** 82043, 82570**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.



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**Mitochondrial M2 Antibody, IgG****Panel Code: AM2****CPT Codes(s):** 83516**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** 2 times/week**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot ASAP. UNACCEPTABLE: Hemolyzed; lipemic, or microbially contaminated samples.

NOTE: Alternate specimen: Green Top (Lithium or Sodium Heparin) or Lavender Top (EDTA) plasma. Centrifuge and aliquot ASAP.

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**Mononucleosis Screen****Panel Code: MON****CPT Codes(s):** 86308**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 0.5 mL EDTA plasma or whole blood REFRIGERATED. EDTA Whole blood acceptable 24 hours. EDTA plasma acceptable 48 hours if stored at 2-8°C or frozen &lt;= -10°C for 3 months.

NOTE: If test is negative but patient has clinical and hematologic evidence of mono, notify the laboratory. Prozone may have occurred and we will repeat the test on a dilute specimen.



**Morphology, Smear Review (MORP)**

Panel Code: MORP

Basophils  
Basophils (Absolute)  
Eosinophils (Absolute)  
Eosinophils  
Hematocrit  
Hemoglobin  
Lymphs  
Lymphs (Absolute)  
MCHC  
MCV  
Mean Platelet Volume  
Monocytes  
Monocytes (Absolute)  
Neutrophils  
Neutrophils (Absolute)  
Platelet Count  
RBC  
RDW  
WBC

**CPT Codes(s):** 85025

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE if < 24 hours old.

May require ABN form. Pediatric minimum volume is 1/0.4 - 1 mL tube/0.4 microtainer;  
EDTA tube must have at least 1 mL of blood.

**UNACCEPTABLE:** Volume less than 1 mL. Peripheral smears without lavender top. Specimen > 24 hours old.

**MTHFR Genotype**

Panel Code: MTR

**CPT Codes(s):** 81291

**Test Performed at:** FAIRVIEW LABORATORY

**Analytic Time:** 168 hours (7 days)

**Days Test Performed:** Friday

**Specimen:**

**COLLECT:** Lavender Top

**SUBMIT:** 4 mL whole blood ROOM TEMPERATURE. Minimum volume 3 mL.

**UNACCEPTABLE:** Frozen, clotted, or opened specimen, incorrect anticoagulant, specimen more than 5 days old.

Testing requested on a sample punctured by an automated instrument. Add on testing to hematology samples is not accepted.

**NOTE:** Alternate specimen: Yellow Top (ACD Solution A) whole blood ROOM TEMPERATURE. Alternate source: Bone Marrow.



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**Mumps Antibody, IgG****Panel Code: MIS****CPT Codes(s):** 86735**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: Hemolyzed or lipemic specimen.

NOTE: Specimen may be refrigerated up to 5 days OR frozen indefinitely.

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**Myasthenia Gravis (MG) Evaluation, Adult****Panel Code: MGA**

ACh Receptor Binding Antibody

ACh Receptor Modulating Antibody

Striational Muscle Antibody

**CPT Codes(s):** 83519 x 2, 83520**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: RED TOP

SUBMIT: 3 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimens.

NOTE: Initial assays are AChR binding, modulating and striational antibodies. If the AChR modulating is &gt; or = 90%, and striational antibodies are positive, AChR Ganglionic Neuronal antibody (CPT 83519), GAD65 (CPT 86341), VGKC antibody (CPT 83519) and CRMP-5-IgG (CPT 84182) are performed at added charges.





**Myasthenia Gravis (MG) Evaluation,with MuSk**

Panel Code: LAB3079

**Reflex**

ACh Receptor Binding Antibody  
ACh Receptor Modulating Antibody  
Striational Muscle Antibody

**CPT Codes(s):** 83519 x 2, 83520

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 168 hours (7 days)

**Days Test Performed:** Varies

**Specimen:**

**COLLECT:** 10mL RED TOP

**SUBMIT:** 3 mL serum REFRIGERATED.

**UNACCEPTABLE:** Markedly hemolyzed, lipemic or icteric specimens.

**NOTE:** Initial assays are AChR binding, modulating and striational antibodies. If the AChR modulating is  $\geq 90\%$ , and striational antibodies are  $\geq 1:120$ , the AChR ganglionic neuronal autoantibody (CPT 83519), GAD65 (CPT 86341), VGKC antibody (CPT 83519) and CRMP-5-IgG Western Blot (CPT 84182) are performed with additional charges. If AChR binding antibodies are  $\leq 0.02$  and AChR modulating antibodies are  $\leq 20\%$ , then MuSK autoantibodies (CPT 83519) will be performed at an additional charge.

**Myasthenia Gravis (MG)/Lambert-Eaton Syndrome (LES) Evaluation**

Panel Code: LES

ACh Receptor Binding Antibody  
ACh Receptor Modulating Antibody  
Calcium Channel Binding Aby N-Type  
Calcium Channel Binding Aby P/Q Type  
Striational Muscle Antibody

**CPT Codes(s):** 83519 x 4, 83520

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 168 hours (7 days)

**Days Test Performed:** Varies

**Specimen:**

**COLLECT:** 10mL Red Top

**SUBMIT:** 3 mL serum REFRIGERATED.

**UNACCEPTABLE:** Markedly hemolyzed, lipemic or icteric specimens.

**NOTE:** Initial assays are AChR Binding aby, AChR Modulating aby, and striational aby and Calcium Channel abys (PQ and N). If AChR modulating aby is  $\geq 90\%$ , and striational aby is  $\geq 1:120$ , CRMP-5 W. Blot (CPT code 84182) and AChR Ganglionic Neuronal aby (CPT 83519) are performed at added charges.



**Mycobacterium tuberculosis Infection by  
QuantiFERON-TB Gold****Panel Code: LAB3150****CPT Codes(s):** 86481**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Wed Fri**Specimen:****COLLECT:** 4 QuantiFERON Tubes**SUBMIT:** If drawn at clinic, specimens must be at room temperature until incubated. Must be incubated within 16 hours of collection. Clinic patients can be drawn at a HealthEast facility. 1) Collect 4 TBQ tubes. 2) Invert 10 times to coat inner surface of tubes. DO NOT shake to froth.**Mycophenolic Acid and Mycophenolic Acid  
Glucuronide****Panel Code: MPA****CPT Codes(s):** 80180**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** 2 times per week**Specimen:****COLLECT:** Lav Top Plasma**SUBMIT:** 1 mL plasma from a lavender top FROZEN. Minimum volume 0.4 mL. Centrifuge and aliquot within 2 hours of collection.**UNACCEPTABLE:** Sample not separated from cells within 2 hours of collection.**NOTE:** Usual sampling time is immediately prior to next dose (trough).**Mycoplasma hominis PCR****Panel Code: MHR****CPT Codes(s):** 87798**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Sterile Screw-Top Container**SUBMIT:** SWAB: Cervical, urethral, vaginal or wound. FLUID: 1-2 mL sterile screw top. Respiratory (neonate only < 3 mos), reproductive, synovial. URINE: 10 mL REFRIGERATED.**UNACCEPTABLE:** Cotton swab, wooden shaft, gel swab, dry swabs, charcoal swabs or Port-a-Cul tube.**NOTE:** Specimen source is REQUIRED.

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**Mycoplasma hominis PCR, Blood****Panel Code: LAB3090****CPT Codes(s):** 87798**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender (Whole Blood)

SUBMIT: 1 mL Lavender Top Whole Blood REFRIGERATED in original tube.

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**Mycoplasma pneumoniae Antibodies, IgG and IgM****Panel Code: MYC****CPT Codes(s):** 86738 x2**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, heat-inactivated, hemolyzed, icteric, or severely lipemic specimens.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent."

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**Mycoplasma pneumoniae by PCR****Panel Code: LAB3138****CPT Codes(s):** 87581**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: STERILE CONTAINER

SUBMIT: 2 mL respiratory specimen [bronchoalveolar lavage (BAL), sputum, tracheal aspirate, or pleural fluid] in a sterile screw-top container (minimum volume 0.5 mL) OR nasopharyngeal swab or bronchial brushings in ARUP viral transport media FROZEN.

NOTE: Specimen source required. Place each swab specimen in an individually sealed bag. Fluid is also acceptable in viral transport media. Specimen stable Ambient 24 hours, Refrigerated 5 days, Frozen 1 year. Alternate specimen: 1 mL CSF in sterile container FROZEN. Minimum volume 0.5 mL.



**Myeloperoxidase (MPO) Antibody IgG****Panel Code: MYP****CPT Codes(s):** 83876**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL. Centrifuge and aliquot ASAP after collection.

UNACCEPTABLE: Gross hemolysis.

**Myoglobin, Serum****Panel Code: MYS****CPT Codes(s):** 83874**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly lipemic specimen.

**Myoglobin, Urine****Panel Code: MYG****CPT Codes(s):** 83874**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: SO-Myoglobin Tube

SUBMIT: 5 mL random urine aliquoted into a Urine Myoglobin (Na<sub>2</sub>CO<sub>3</sub>) Transport Tube within 1 hour of collection REFRIGERATED.

UNACCEPTABLE: Urine specimen NOT received in a Urine Myoglobin Transport Preservative Tube.

NOTE: Urinary myoglobin is highly unstable unless alkalinized with Na<sub>2</sub>CO<sub>3</sub> preservative. Even with alkalinization, myoglobin deterioration is variable and sample dependent (approximate averages of 10% at 1 day, 20% at 3 days, and 30% at 7 days).

**MyoMarker Panel 3 Plus****Panel Code: MYO**

Anti-Jo-1, Ab  
Anti-PM/Sci-100 Ab  
Anti-SAE 1, IgG  
Anti-SS-A 52 kD Ab, IgG  
Anti-U1 RNP Ab  
EJ  
Fibrillarin (U3 RNP)  
Ku  
MDA-5 (P140)(CADM-140)  
MI-2  
NXP-2 (P140)  
OJ  
PL-12  
PL-7  
SRP  
TIF1 GAMMA (P155/140)  
U2 snRNP

**CPT Codes(s):** 83516 x9 86235 x8  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 432 hours (18 days)  
Days Test Performed: Batched weekly

**Specimen:**

COLLECT: Red Top (1 mL serum)  
SUBMIT: 3 mL serum REFRIGERATED. Minimum volume is 1.0 mL serum.  
UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimen.

**Neisseria gonorrhoeae by PCR, Non-genital****Panel Code: LAB3154**

**CPT Codes(s):** 87591  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 72 hours (3 days)  
Days Test Performed: Mon-Fri and Sun

**Specimen:**

COLLECT: Aptima® Unisex (Blue Shaft) Swab  
SUBMIT: Aptima® Unisex Collection Swab (blue shaft) of eye, throat, or rectum source in Aptima® Unisex Swab Specimen Transfer Tube REFRIGERATED.  
UNACCEPTABLE: Transport tube containing a swab not included in the collection kit , a large white cleaning swab, more than 1 swab, no collection swab.  
NOTE: Specimen source is REQUIRED. Eye, throat, rectum (perirectal acceptable) specimens only. These specimens are not FDA approved for this assay.  
Discard the white cleaning swab. It is a cleaning swab and should NOT be used for collection.  
The same specimen can be used for Chlamydia and Gonorrhea testing.  
Specimens should be sent in individual bags to limit the possibility of cross contamination.



**Neisseria gonorrhoeae, Amplified Detection****Panel Code: GCA****CPT Codes(s):** 87591**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** APTIMA Swab OR Urine**SUBMIT:** Aptima (Blue) swab in Aptima UNISEX Specimen Collection Kit for ENDOCERVICAL and Male URETHRAL sources OR Aptima (Orange) swab in Aptima VAGINAL Specimen Collection Kit for VAGINAL source OR 2 mL urine in Aptima Urine Specimen Transport Tube REFRIGERATED. See the Specimen Collection section of this manual for collection instructions.**UNACCEPTABLE:** Large cleaning swab, eye or rectal (non-urogenital) source, or urine specimen >30 mL or not transferred to Aptima transport tube within 24 hours or use of inappropriate specimen collection kit for specimen source type.**NOTE:** Specimen source is REQUIRED. This test should not be used for the diagnosis of genital tract infections in prepubertal children for possible sexual abuse. Do not use spermicidal or feminine powder sprays prior to collection. The performance of this assay has not been evaluated in adolescents less than 16 years of age.**Newborn Genetic Screen****Panel Code: NBS****CPT Codes(s):** S3620**Test Performed at:** Minnesota Dept of Health**Analytic Time:** 216 hours (9 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Newborn Screen Card**SUBMIT:** Dried, completely filled-out Newborn Screen Card at ROOM TEMPERATURE.**UNACCEPTABLE:** Circles partially or incompletely filled. Incomplete patient information on card including date and time of birth and date and time of collection. Layering or clotting of blood.**Niacin (Vitamin B3), Plasma****Panel Code: VB3****CPT Codes(s):** 84591**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 312 hours (13 days)**Days Test Performed:** Varies; one day per week.**Specimen:****COLLECT:** 3 LAVS (protect from light)-4 mL Plasma**SUBMIT:** 4 mL plasma FROZEN in a separate amber tube. Specimen must be centrifuged and plasma separated from cells within 30 minutes of collection. Specimen must be PROTECTED FROM LIGHT.**UNACCEPTABLE:** Not protected from light or markedly hemolyzed or lipemic.**NOTE:** \* Performance days vary.

**Nicotine and Metabolites, Urine****Panel Code: NIC**

Anabasine  
Cotinine  
Nicotine  
Nornicotine

**CPT Codes(s):** 80323**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:****COLLECT:** Random Urine in Screw-Top Container**SUBMIT:** 5 mL aliquot of a random urine ROOM TEMPERATURE (no preservative).**Norovirus Group I and II Detection by RT-PCR****Panel Code: NOR****CPT Codes(s):** 87798**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Sun-Sat**Specimen:****COLLECT:** Cary-Blair Transport Media**SUBMIT:** 3 mL of stool in Cary-Blair Transport Media REFRIGERATED.**UNACCEPTABLE:** Samples received in sterile containers greater than 2 hours from collection.

Preserved stool not received at performing laboratory within 48 hours of collection.

Samples collected on patients hospitalized for greater than 3 days without prior consultation with Infectious Diseases Diagnostic Laboratory.

**NOTE:** Collect stool in clean, dry bedpan or onto newspaper placed over toilet seat. Those portions of stool containing blood, pus or mucus are especially significant. Immediately place specimen in Cary-Blair transport media and refrigerate. If specimen is collected in a sterile container, sample must be received in the lab and transferred to Cary-Blair Transport Media within 2 hours of collection. For low volume samples, a FecalSwab Cary-Blair transport may be used. Dip the provided swab into the stool and place in the transport tube. Bend and break the swab at the red line. Replace and tighten cap.**Nortriptyline (Aventyl®)****Panel Code: LAB3041****CPT Codes(s):** 80335**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Plain Red Top**SUBMIT:** 1mL serum REFRIGERATED. Serum must be separated from cells within 2 hours of draw.**UNACCEPTABLE:** Specimen collected in an SST® tube or markedly hemolyzed or lipemic or icteric specimen.**NOTE:** Recommended collection is 12 hours post dose (trough).

**N-Telopeptide, Cross-Linked, Urine****Panel Code: NTX**

Creatinine, Urine

CPT Codes(s): 82523,82570

Test Performed at: ARUP LABS

Analytic Time: 96 hours (4 days)

Days Test Performed: Tues Wed Thurs Fri Sat

**Specimen:**

COLLECT: Urine 2nd morning void

SUBMIT: 1 mL urine (no preservative) FROZEN. Minimum volume 0.5 mL. May require ABN form.

UNACCEPTABLE: Specimens collected with preservative or contaminated with blood or extensive hemolysis.

NOTE: For monitoring therapy, a baseline specimen should be collected prior to initiation of therapy. Subsequent specimens for comparison should be collected at the same time of day as the baseline specimen.

Alternate specimen: 1 mL aliquot from well-mixed 24-hour collection FROZEN.

Refrigerate during collection. Collect without preservative.

Specimen is stable at Room Temperature 24 hours, Refrigerated 1 week, and Frozen 2 years.

**N-Terminal PRO BNP Outpatient****Panel Code: LAB3133**

CPT Codes(s): 83880

Test Performed at: FAIRVIEW LABORATORY

Analytic Time: 24 hours (1 day)

Days Test Performed: All

**Specimen:**

COLLECT: Red Top

SUBMIT: 1.25 mL serum FROZEN. Minimum volume 0.2 mL.

UNACCEPTABLE: Hemolyzed samples.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). Specimen stable Refrigerated 72 hours. Large doses of biotin (10 mg or more per day) may cause clinically significant interference in N-Terminal pro brain natriuretic peptide levels. If interference is suspected, it is strongly recommended that biotin is discontinued for at least one week prior to retesting, upon the advice of the physician.





**N-Terminal PRO BNP, Inpatient/ED****Panel Code: LAB3132****\*\* AVAILABILITY: Hospital Inpatient Only \*\*****CPT Codes(s):** 83880**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:****COLLECT:** Red Top**SUBMIT:** 1.25 mL serum FROZEN. Minimum volume 0.2 mL.**UNACCEPTABLE:** Hemolyzed samples.**NOTE:** Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). Specimen stable Refrigerated 72 hours. Large doses of biotin (10 mg or more per day) may cause clinically significant interference in N-Terminal pro brain natriuretic peptide levels. If interference is suspected, it is strongly recommended that biotin is discontinued for at least one week prior to retesting, upon the advice of the physician.**Occult Blood, Fecal****Panel Code: OBF****CPT Codes(s):** 82272**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Screw-Top Container**SUBMIT:** A small fecal specimen collected into a sterile screw-top container or smeared as a thin preparation to the guaiac paper of the Hemoccult™ SENSE slide kit, ROOM TEMP. An ABN form may be required.**UNACCEPTABLE:** Any other slide kit.**NOTE:** Patient should be instructed to avoid ingesting foods, drugs, vitamins or other substances which can cause false-positive or false-negative test results for at least 48 hours before and continuing through the test period, (red meat, processed meats, liver or vitamin C intake of more than 250 mg/day). Aspirin and other NSAIDS should be avoided.

**Occult Blood, Gastric****Panel Code: OBG****CPT Codes(s):** 82271**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Screw-Top Container**SUBMIT:** 1 mL of gastric contents or emesis in a sterile screw-top container or a nasogastric tube. Specimen can be applied directly to the Gastrocult™ slide and sent to the laboratory.**NOTE:** Patient should be instructed to refrain from ingesting foods, drugs, vitamins or other substances which can cause false-positive or falsenegative test results for at least 48 hours before and continuing through the test period, e.g. red meat, processed meats, liver or vitamin C intake of more than 250 mg/day. Aspirin and other NSAIDS should be avoided.**Oligoclonal Band Profile, CSF & Serum****Panel Code: MSP**

Albumin by Nephelometry

Albumin Index

Albumin, CSF

CSF IgG Synthesis Rate

CSF IgG/Albumin Ratio

IgG Index

IgG, CSF

IgG, serum

Oligoclonal band, CSF

**CPT Codes(s):** 83916x1, 82784 x2, 82040 x1, 82042 x1**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Red Top & Spinal Fluid in Collect Tube**SUBMIT:** 1 mL serum REFRIGERATED AND 1.5 mL spinal fluid REFRIGERATED. Serum specimen must be centrifuged and aliquoted within 2 hours of collection. Label specimens appropriately as serum and CSF. Minimum volume serum 0.5 mL, spinal fluid 0.7 mL.**UNACCEPTABLE:** Not receiving BOTH serum and CSF.**NOTE:** Serum specimen should be drawn within 48 hours of CSF collection. Allow serum to clot completely at room temperature. Separate serum from cells ASAP or within 2 hours of collection.

**Opiates, Urine, Quantitative****Panel Code: LAB3167**

**CPT Codes(s):** 80361, 80365  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 96 hours (4 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container  
**SUBMIT:** 1 mL aliquot random urine collection (no preservative) Refrigerated (0.3 mL minimum).  
**UNACCEPTABLE:** Specimens exposed to repeated freeze/thaw cycles.  
**NOTE:** Stable refrigerated or frozen. For medical purposes only; not valid for forensic use. Identification of specific drug(s) taken by specimen donor is problematic due to common metabolites, some of which are prescription drugs themselves. The absence of expected drug(s) and/or drug metabolite(s) may indicate non-compliance, inappropriate timing of specimen collection relative to drug administration, poor drug absorption, diluted/adulterated urine, or limitations of testing. All drug analytes covered are in the non-glucuronidated (free) forms. The concentration value must be greater than or equal to the cutoff to be reported as positive. A very small amount of an unexpected drug analyte in the presence of a large amount of an expected drug analyte may reflect pharmaceutical impurity. Interpretive questions should be directed to the laboratory.

**Organic Acid, Comprehensive, Urine****Panel Code: OAU**

**CPT Codes(s):** 83918  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** once/week

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container  
**SUBMIT:** Entire collection (20 mL) of a random urine FROZEN in a screw-top container. Freeze within 2 hours of collection. Minimum volume 5 mL.  
**NOTE:** Freeze specimen within 2 hours of collection. Include Diagnosis and Clinical History.

**Osmolality****Panel Code: OSB**

**CPT Codes(s):** 83930  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top/OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED.  
**UNACCEPTABLE:** Markedly hemolyzed specimen.



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**Osmolality, 24 Hour Urine****Panel Code: OSU****CPT Codes(s):** 83935**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and alternate preservatives.

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**Osmolality, Random, Urine****Panel Code: UOS****CPT Codes(s):** 83935**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.

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**Osmotic Fragility, RBC****Panel Code: OFE****CPT Codes(s):** 85557**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Lavender + Lavender on normal control

SUBMIT: 3 mL whole blood REFRIGERATED. Include a control specimen drawn at the same time from a normal unrelated non-smoking individual. Label clearly NORMAL CONTROL. Specimens must arrive at Mayo within 72 hours of collection in original tube. DO NOT aliquot.

UNACCEPTABLE: Specimen clotted or no normal control received or mildly hemolyzed specimen.



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**Ova and Parasite Screen****Panel Code: OPS****CPT Codes(s):** 87177, 87209**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Proto-fix™**SUBMIT:** Stool in Protifix™ vial REFRIGERATED or ROOM TEMP OR walnut-sized portion of stool in clean screw-top container REFRIGERATED.**UNACCEPTABLE:** Less than 1 mL stool. Multiple stools collected within 24 hr Stool in culture vial [ETM™]. Unpreserved stool more than 48 hours old. Specimen containing antacids or barium. Specimen containing urine.**NOTE:** See the Specimen Collection section of this manual for collection instructions.

Requests on patients hospitalized for more than 3 days require consultation with Microbiology. Multiple specimens (X3) collected over several days result in the highest yield of positives.

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**Ova and Parasite, Sputum****Panel Code: LAB3087****CPT Codes(s):** 87209**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Sterile screw top**SUBMIT:** Sputum in a clean screw-top container REFRIGERATED. Transport specimen to the laboratory immediately.**UNACCEPTABLE:** Less than 1 mL of sputum. Sputum in preservative.**NOTE:** See the Specimen Collection section of this manual for collection instructions.

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**Ova and Parasite, Urine****Panel Code: OPU****CPT Codes(s):** 87177, 87209**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 8 hours**Days Test Performed:** All**Specimen:****COLLECT:** Clean Screw-Top Container**SUBMIT:** Urine collected around noon REFRIGERATED.**NOTE:** Instruct patient to collect the middle and end of the urine stream and to squeeze out the last few drops of urine into the container. It is recommended to collect noon specimens on 3 consecutive days.

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**Oxalate, 24 Hour Urine****Panel Code: OLU****CPT Codes(s):** 83945**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue Wed Thu Fri**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: One 10 mL aliquot of a 24 hour collection (specimen must be refrigerated at all times).  
Submit REFRIGERATED.

UNACCEPTABLE: Specimen not kept refrigerated during the collection time or during transport.

NOTE: Total volume (mL) REQUIRED.

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**Oxcarbazepine (Trileptal®) or Eslicarbazepine  
Metabolite (MHD)****Panel Code: OXB****CPT Codes(s):** 80183**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top-1 mL Serum

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.5 mL. Specimen must be  
centrifuged and aliquoted within 2 hours of collection.UNACCEPTABLE: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or  
ACD solution).

NOTE: Recommended collection is Pre-dose (trough) draw - At steady state concentration.

Alternate specimen: Plasma from Lavender Top (EDTA). Centrifuge and aliquot within 2  
hours of collection.

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**Pain Management Drug Panel, Urine****Panel Code: LAB3188**

Barbiturates  
Benzodiazepine-like  
Cannabinoids (11-nor-9-carboxy-THC)  
Ethyl Glucuronide  
Muscle Relaxant(s): carisoprodol, meprobamate  
Opiates/Opioids  
Phencyclidine (PCP)  
Stimulants

**CPT Codes(s):** 80307

**Test Performed at:** ARUP LABS

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** All

**Specimen:**

COLLECT: Random Urine 4 mL x2

SUBMIT: 4 mL random urine (no preservative) in each of two ARUP standard transport tubes

REFRIGERATED. Minimum volume 2 mL in each of two tubes.

UNACCEPTABLE: Specimens exposed to repeated freeze/thaw cycles.

NOTE:

**Pain Management Panel, Screen with Reflex to Quantitation****Panel Code: LAB3210**

Barbiturates  
Benzodiazepine-like  
Cannabinoids (11-nor-9-carboxy-THC)  
Ethyl Glucuronide  
Muscle Relaxant(s): carisoprodol, meprobamate  
Opiates/Opioids  
Phencyclidine (PCP)  
Stimulants

**CPT Codes(s):** 80307

**Test Performed at:** ARUP LABS

**Analytic Time:** 192 hours (8 days)

**Days Test Performed:** All

**Specimen:**

COLLECT: Random Urine 4 mL x2

SUBMIT: 4 mL random urine (no preservative) in each of two ARUP standard transport tubes

REFRIGERATED. Minimum volume 2 mL in each of two tubes.

UNACCEPTABLE: Specimens exposed to repeated freeze/thaw cycles.

NOTE: If screen is positive, quantitative confirmation is performed at an additional charge.



**Paraneoplastic Autoantibody Evaluation, Cascade****Panel Code: NEO**

AChR Ganglionic Neuronal Ab, S  
Amphiphysin Ab, S  
Anti-Glial Nuclear, Type 1  
Anti-Neuronal Nuclear Ab, Type 1  
Anti-Neuronal Nuclear Ab, Type 2  
Anti-Neuronal Nuclear Ab, Type 3  
CRMP-5-IgG, S  
Neuronal (V-G) K<sup>+</sup> Channel Ab, S  
N-Type Calcium Channel Ab  
P/Q-Type Calcium Channel Ab  
Purkinje Cell Cytoplasmic Ab Type 1  
Purkinje Cell Cytoplasmic Ab Type 2  
Purkinje Cell Cytoplasmic Ab Type Tr  
Striational (Striated Muscle) Ab, S

**CPT Codes(s):** 83519 x 5, 83520, 86256 x9

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 408 hours (17 days)

**Days Test Performed:** Varies

**Specimen:**

**COLLECT:** 2 Red Tops

**SUBMIT:** 4 mL serum REFRIGERATED.

**UNACCEPTABLE:** Markedly hemolyzed, lipemic or icteric specimen.

**NOTE:** If IFA pattern suggests CRMP-5-IgG, CRMP-5-IgG W. Blot (84182) is performed and charged. If IFA pattern suggests GAD65, GAD65 ab (86341) is performed and charged. If IFA pattern suggest NMDA-R, NMDA-R Ab CBA(86255) and/or NMDA-R Ab IF Titer Assay(86256) is performed and charge. If IFA pattern AMPA-R, AMPA-R Ab CBA (86255) and/or AMPA-R IF Titer Assay (86256) is performed and charged. If IFA pattern suggest GABA-B-R, GABA-B-R Ab CBA (86255) and/or GABA-B-R Ab IF Titer Assay (86256) is performed and charged. If VGKC >0.00, LGI1-IgG CBA(86255) and CASPR2-IgG CBA(86255) are performed and charged. If IFA pattern suggest DPPX, then DPPX antibody CBA and DPPX antibody titer is performed at an additional charge. If IFA pattern suggest mGluR1, then mGluR1 antibody CBA and mGluR1 antibody titer is performed at an additional charge. If striational striated muscle antibody is 1:7680 or greater, ACh receptor binding antibody, CRMP-5 IgG Western blot, and ACh receptor (muscle) modulating ant\*





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**Parasite Identification****Panel Code: PID****CPT Codes(s):** 87169**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Clean Screw-Top Container

SUBMIT: Parasite in clean screw-top container OR worm in formalin OR skin scrapings in mineral oil on clean glass slide.

NOTE: See the Specimen Collection section of this manual for collection instructions for scabies.

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**Parathyroid Hormone Intact****Panel Code: PHI****CPT Codes(s):** 83970**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum. Refrigerated up to 2 days or FREEZE after 2 days.

UNACCEPTABLE: Markedly hemolyzed specimen. Specimen collected in an SST® tube.

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**Parathyroid Hormone Intact with Minerals****Panel Code: PHM**

Calcium, serum

Creatinine, serum

Glomerular Filtration Rate, estimated (eGFR)

Parathyroid Hormone Intact, serum

Phosphorus, serum

**CPT Codes(s):** 82310, 82565, 83970, 84100**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 2 days or FREEZE after 2 days.

UNACCEPTABLE: Markedly hemolyzed specimen. Specimen collected in an SST® tube.



**Parathyroid Hormone, Intraoperative****Panel Code: OPH****\*\* AVAILABILITY: St. John's, St. Joseph's & Woodwinds Hospital Inpatient Only \*\*****CPT Codes(s):** 83970**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 30 minutes**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender Top

SUBMIT: Submit 1mL EDTA plasma. Operating Room must call the Chemistry lab to schedule when specimen is drawn OR deliver specimen to laboratory accessioning department.

Laboratory will call Operating Room with results.

**Parathyroid Hormone-Related Peptide (PTHrP) by LC-MS/MS, Plasma****Panel Code: PPR****CPT Codes(s):** 82542**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Mon Wed Fri Sun**Specimen:**

COLLECT: Protease Inhibitor Tube (Plasma)

SUBMIT: 1.5 mL plasma FROZEN immediately in an ARUP Standard Transport Tube. Minimum volume 0.7 mL. Centrifuge and aliquot within 1 hour of collection.

UNACCEPTABLE: Grossly hemolyzed specimens.

NOTE: A winged blood collection set (butterfly needle with tubing) must be used. Filling collection tubes directly through a needle/tube-holder assembly would increase the risk of chemical reflux back into the vein of the patient and is NOT recommended. Mix collection tube thoroughly. Separate the plasma from cells within one hour of collection by centrifugation.

**Parietal Cell Antibodies, IgG****Panel Code: PCA****CPT Codes(s):** 83516**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimen.



**Parvovirus B19 Antibodies, IgG and IgM****Panel Code: B19****CPT Codes(s):** 86747 x2**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, heat-inactivated, hemolyzed, hyperlipemic, or icteric serum.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens. Mark specimens plainly as "acute" or "convalescent." Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA).

**Peanut Components Allergy Panel****Panel Code: LAB3144****CPT Codes(s):** 86008 x5**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** 2 times per week**Specimen:**

COLLECT: Red Top

SUBMIT: 1.5 mL serum REFRIGERATED. Minimum volume 0.75 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Hemolyzed, icteric, or lipemic specimens.

NOTE: Includes components rAra h 1, rAra h 2, rAra h 3, rAra h 8, and rAra h 9. It is recommended to order the test Peanut IgE (LAB592) prior to ordering the Peanut Components Allergy Panel.

**Pentobarbital (Nembutal®)****Panel Code: PTB****CPT Codes(s):** 80345**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen drawn in an SST® tube.

NOTE: Always order STAT for an induced coma patient.



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**pH Venous****Panel Code: PHV****CPT Codes(s):** 82800**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1 hours**Days Test performed:** All**Specimen:**

COLLECT: Syringe (Lithium Heparin)

SUBMIT: 4 ml whole blood in a lithium heparin syringe. Acceptable 30 minutes at RT or up to 60 minutes on WET ICE (2-8 C).

NOTE: Specimen should be drawn free of air and mixed well. If transport will be greater than 30 minutes, place on WET ICE (2-8 C).

---

**pH, Body Fluid****Panel Code: PHF****CPT Codes(s):** 83986**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED.

UNACCEPTABLE: Specimen &gt; 24 hours old.

NOTE: Specimen source is REQUIRED.

---

**pH, Cord Blood****Panel Code: PHC****CPT Codes(s):** 82800**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 1 hours**Days Test Performed:** All**Specimen:**

COLLECT: Syringe (Lithium Heparin)

SUBMIT: 0.3 mL whole blood in a syringe (rinsed with lithium heparin) ON WET ICE. Specimen must arrive within 1 hour of collection.

NOTE: Specimen should be drawn free of air, replace needle with cap, mixed well and placed on wet ice. Transport immediately to laboratory. DO NOT REMOVE CAP BEFORE TESTING.



---

**pH, Fecal****Panel Code: SPH****CPT Codes(s):** 83986**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Screw-Top Container-Liquid Specimen Only

SUBMIT: Small amount of fecal material REFRIGERATED.

UNACCEPTABLE: Formed stool.

---

**Phencyclidine (PCP), Urine, Quantitative****Panel Code: LAB3163****CPT Codes(s):** 83992**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Mon**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot random urine collection (no preservative), Refrigerated (minimum volume 0.5 mL).

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use.

---

**Phenobarbital (Luminal®)****Panel Code: PHN****CPT Codes(s):** 80184**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

---

**Phenytoin (Dilantin®)****Panel Code: DLN****CPT Codes(s):** 80185**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Specimen collected in an SST® tube. Markedly hemolyzed specimen



**Phenytoin, Free (Dilantin®, Free)****Panel Code: DLF****CPT Codes(s):** 80186**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top/ OP Red Top

SUBMIT: 2 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube. Markedly hemolyzed specimen.

**Phosphorus****Panel Code: PO4****CPT Codes(s):** 84100**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 4 days.

UNACCEPTABLE: Hemolyzed specimen.

**Phosphorus, 24 Hour Urine****Panel Code: POU****CPT Codes(s):** 84105**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (HCL) pH 2.0

SUBMIT: 10 mL aliquot of 24 hour urine collection (preserved with 20 mL of 6N HCl at start of collection) REFRIGERATED. Adjust pH to 2.0.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and alternate preservatives.

**Phosphorus, Random Urine****Panel Code: UPO****CPT Codes(s):** 84105**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.



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**Pinworm Prep****Panel Code: PIN****CPT Codes(s):** 87172**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Pinworm Paddle

SUBMIT: Pinworm paddle at ROOM TEMPERATURE or REFRIGERATED.

UNACCEPTABLE: Opaque tape.

NOTE: Collect specimen after the patient has been in bed for several hours or in the early morning before patient arises or uses the bathroom. Wearing gloves, press the "sticky" side of the paddle against the right and left perianal folds and place paddle back in tube. A single paddle may be used for both sides.

---

**Plasminogen Activity****Panel Code: PMG****CPT Codes(s):** 85420**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately in a separate tube.

UNACCEPTABLE: Specimen not received frozen, markedly hemolyzed or lipemic specimen.

NOTE: See the Specimen Collection section of this manual for preparation of platelet-free plasma.

---

**Platelet Count****Panel Code: PLT****CPT Codes(s):** 85049**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood ROOM TEMPERATURE. Specimen must arrive within 24 hours of collection.

UNACCEPTABLE: Specimen more than 24 hours old, frozen or clotted specimen, volume less than 1 mL.



**Platelet Function Test****Panel Code: PFA****CPT Codes(s):** 85576**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** 2 Blue 21ga NO Butterfly/NO pneumatic**SUBMIT:** 3 mL whole blood unspun, unopened, ROOM TEMPERATURE. Do not mix with mechanical mixer. **MUST BE RECEIVED AT ST. JOSEPH'S HOSPITAL WITHIN 4 HOURS OF DRAW. CALL FOR STAT PICKUP IF NEEDED.** Needs to be kept separate from INR, PTT.**UNACCEPTABLE:** Specimen that has been opened, spun, refrigerated, clotted, more than 4 hours old, or sent through a pneumatic tube. **NOTE:** If the original test with epinephrine is abnormal, then a second test with ADP will be performed and charged separately using CPT code 85576.**Platelet Function P2Y12****Panel Code: PVX****CPT Codes(s):** 85576**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:****COLLECT:** Blue Top-Greiner-2mL (X2)**SUBMIT:** 2 mL whole blood unspun, unopened, ROOM TEMPERATURE in a special Greiner Blue Top Tube (x2). Contact lab for information and supply. Testing must be completed at Fairview within 4 hours of collection. No other tube will be accepted. Do not mix on mechanical mixer. Fill only to black arrow on tube. Do not send through the pneumatic tube system (PTS).**UNACCEPTABLE:** Specimen collected in any other tube, specimens that have been spun, opened, refrigerated, are more than 4 hours old, clotted, underfilled or overfilled. Specimens sent via PTS.**NOTE:** Patients who have been treated with glycoprotein IIb/IIIa inhibitors should not be tested until the platelet function has recovered. This time period is approximately 48 hours after discontinuation of eptifibatide and tirofiban, and 14 days after discontinuation of abciximab. Other platelet drugs such as P2Y12 inhibitors (e.g. clopidogrel), NSAIDs, etc. may also affect the results of this assay. The test should not be performed in patients with low platelet counts (less than  $100 \times 10^9/L$ ) or in patients with inherited platelet dysfunction.



**Poliovirus (Types 1, 3) Antibodies**

Panel Code: PIO

Polio 1 Titer

Polio 3 Titer

CPT Codes(s): 86658x2

Test Performed at: ARUP LABS

Analytic Time: 216 hours (9 days)

Days Test Performed: Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, hemolyzed, or severely lipemic specimens. Plasma.

NOTE: The presence of neutralizing antibodies against poliovirus implies immunity. The serum neutralization test is serotype specific. Antibodies against one type does not indicate immunity against the other type.

**Porphyryns and Porphobilinogen (PBG), Urine**

Panel Code: PRQ

Coproporphyrin I

Coproporphyrin III

Creatinine

Heptacarboxylate Porphyrin

Porphobilinogen

Uroporphyrins

CPT Codes(s): 84110, 84120

Test Performed at: ARUP LABS

Analytic Time: 120 hours (5 days)

Days Test Performed: Mon Tue Wed Thu Fri

**Specimen:**

COLLECT: 24Hr(No Preserv)AMBER

SUBMIT: 8 mL aliquot of a 24 hour urine (no preservative) collection FROZEN in a separate ARUP Amber Transport Tube (PROTECT FROM LIGHT). REFRIGERATE specimen during collection. Minimum volume 4 mL. May require ABN form.

UNACCEPTABLE: Not protected from light. Stored at room temperature.

NOTE: Total volume (mL) and collection time interval (hours or random) REQUIRED.

Refrigerate during 24 hour collection. See the Specimen Collection section of this manual for collection instructions. DO NOT freeze entire collection.

Alternate specimen: Random urine collection (8 mL aliquot FROZEN in Amber Tube).

Specimen is stable Refrigerated 4 days, Frozen 1 month.

Urine porphyrins are useful for the evaluation of cutaneous photosensitivity to exclude porphyria cutanea tarda (PCT). Urine porphobilinogen (PBG) is useful for the evaluation of neurologic and/or psychiatric symptoms to exclude acute porphyrias such as acute intermittent porphyria (AIP).



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**Potassium****Panel Code: K****CPT Codes(s):** 84132**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Centrifuge and separate serum from cells within 4 hours of collection. See special instructions section of this manual for "Potassium Specimen Recommendations".

---

**Potassium, 24 Hour Urine****Panel Code: KU****CPT Codes(s):** 84133**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

---

**Potassium, Random Urine****Panel Code: UK****CPT Codes(s):** 84133**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.

---

**Prealbumin****Panel Code: PAB****CPT Codes(s):** 84134**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 3 days.

UNACCEPTABLE: Markedly hemolyzed specimen.

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**Prenatal Screen Cascade****Panel Code: LAB2193**

ABO/RH  
Antibody Screen  
Hepatitis B Surface Antigen  
Rubella IgG  
Syphilis Ab Screen

**CPT Codes(s):** 86900, 86901, 86850, 87340, 86762, 86780

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** Mon Tue Wed Thu Fri Sat

**Specimen:**

**COLLECT:** 1 Red Top & 1 EDTA Lavender Top

**SUBMIT:** 4 mL whole blood and 2 mL serum REFRIGERATED. Hepatitis B Surface Antigen serum aliquot must be refrigerated & stored up to 6 days at 2°-8° C.

**UNACCEPTABLE:** Incompletely or incorrectly labeled specimen. Specimen collected in an SST® tube. Markedly hemolyzed specimens.

**NOTE:** If ABY ID & Titer are indicated, they will be performed & charged separately using CPT codes 86870 & 86886. Extra specimen may be required. If Treponema Antibody (Syphilis) is positive or equivocal, RPR will be performed and charged separately using CPT code 86952. If Hepatitis B Surface Antigen is positive, it will be confirmed by neutralization testing.

**Prenatal Screen Cascade and Hemogram****Panel Code: LAB2194**

ABO/RH  
Antibody Screen  
Hemogram 1  
Hepatitis B Surface Antigen  
Rubella IgG  
Syphilis Ab Screen

**CPT Codes(s):** 86900, 86901, 86850, 86762, 87340, 85025, 86780

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** Mon Tue Wed Thu Fri Sat

**Specimen:**

**COLLECT:** 1 Red Top and 2 Lavender tops

**SUBMIT:** 3 mL serum AND 8 mL whole blood (Lavender Tops) REFRIGERATED. Specimen must arrive within 24 hours of collection.

**UNACCEPTABLE:** Incompletely or incorrectly labeled specimen for blood type. Clotted Lavender Top. Specimen collected in an SST® tube. Markedly hemolyzed.

**NOTE:** If ABY ID and Titer are indicated, they will be performed and charged separately using CPT codes 86870 & 86886. If Treponema Antibody (Syphilis) is positive or equivocal, RPR will be performed and charged separately using CPT code 86952. If Hepatitis Surface Antigen is positive, it will be confirmed by neutralization testing.



**Primidone (Mysoline) and Phenobarbital****Panel Code: LAB3029**

Phenobarbital

**CPT Codes(s):** 80184, 80188**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum centrifuged within 2 hours and REFRIGERATED.

UNACCEPTABLE: Specimen markedly hemolyzed.

NOTE: For proper interpretation a phenobarbital level is included in the assay.

**Procainamide (Pronestyl®) and N-Acetyl  
Procainamide (NAPA)****Panel Code: LAB3028****CPT Codes(s):** 80192**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.50 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: EDTA plasma, Gray (sodium fluoride/potassium oxalate) or separator tubes or gels. Samples not separated from cells within 2 hours of collection.

NOTE: Alternate specimen: Plasma from Green Top (sodium heparin).

**Procalcitonin****Panel Code: PCL****CPT Codes(s):** 84145**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 48 hours. FROZEN if not submitted within 48 hours.

UNACCEPTABLE: Specimens &gt; 48 hours if not frozen. Specimen stored frozen &gt;15 days or submitted to more than 3 freeze/thaw cycles.



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**Progesterone****Panel Code: PRG**

**CPT Codes(s):** 84144  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**  
COLLECT: IP Green Top / OP Red Top  
SUBMIT: 1 mL serum REFRIGERATED up to 10 days.

---

**Prolactin****Panel Code: PRL**

**CPT Codes(s):** 84146  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**  
COLLECT: IP Green Top / OP Red Top  
SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

---

**Prolactin, Pituitary Macroadenoma****Panel Code: PLP**

**CPT Codes(s):** 84146  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**  
COLLECT: Red Top  
SUBMIT: 1 mL Serum REFRIGERATED up to 7 days.  
NOTE: Dilutions of X10 and X100 will be performed to rule out the possibility of high-dose hook effect.

---

**Propafenone (Rythmol®)****Panel Code: PFO**

**CPT Codes(s):** 80299  
**Test Performed at:** Mayo Medical Laboratories  
**Analytic Time:** 72 hours (3 days)  
**Days Test Performed:** Mon Wed Fri

**Specimen:**  
COLLECT: Plain Red Top  
SUBMIT: 3 mL serum REFRIGERATED.  
UNACCEPTABLE: Specimen drawn in an SST® tube.  
NOTE: Patient must have received propafenone for at least 3 days before drawing a level. The level should be drawn just before administration of the next dose.

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**Propoxyphene and Metabolite, Urine, Quantitative**

Panel Code: LAB3212

Norpropoxyphene (qualitative only)  
Propoxyphene

CPT Codes(s): 80367

Test Performed at: ARUP LABS

Analytic Time: 192 hours (8 days)

Days Test Performed: Mon

**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.

Minimum volume 0.5 mL

NOTE:

**Prostate Specific Antigen (PSA), Total & Free**

Panel Code: PFT

CPT Codes(s): 84153, 84154

Test Performed at: ARUP LABS

Analytic Time: 24 hours (1 day)

Days Test Performed: All

**Specimen:**

COLLECT: Red-Top

SUBMIT: 1 mL serum FROZEN. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection. May require ABN form.

UNACCEPTABLE: Grossly hemolyzed specimens.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA).

**Protein C Activity**

Panel Code: PCF

CPT Codes(s): 85303

Test Performed at: FAIRVIEW LABORATORY

Analytic Time: 120 hours (5 days)

Days Test Performed: 2-3 times/week

**Specimen:**

COLLECT: BLU-PltPrPlasmaFZw/4hr

SUBMIT: 1 mL platelet poor plasma from Blue Top (Citrate) tube FROZEN immediately (split evenly between 2 aliquot tubes).

UNACCEPTABLE: Underfilled or overfilled collection tube, clotted specimen, frozen whole blood specimen, whole blood received &gt;4 hours after collection, or platelet-free plasma not frozen within 4 hours of collection.

NOTE: To obtain Platelet Poor Plasma: Centrifuge specimens for 30 minutes at 3000 rpm. Aliquot plasma (1 mL into each tube) and freeze. If there is limited platelet poor plasma (~1 mL), then aliquot it into 2 tubes. If there is &lt;1 mL of plasma, then aliquot all into 1 tube. Whole blood Blue Top tubes may be sent at ROOM TEMPERATURE if they will arrive at Fairview/UMMC within 4 hours of collection.



---

**Protein CSF****Panel Code: PTC****CPT Codes(s):** 84157**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 0.5 mL spinal fluid REFRIGERATED. Specimen must arrive within 24 hours of collection.

---

**Protein, 24 Hour Urine****Panel Code: TPU****CPT Codes(s):** 84156**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

---

**Protein, Body Fluid****Panel Code: TPF****CPT Codes(s):** 84157**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED.

NOTE: Specimen source is REQUIRED.

---

**Protein, Random Urine****Panel Code: UTP****CPT Codes(s):** 84156**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.



---

**Protein, Timed Urine (non-24 hour)****Panel Code: TUP****\*\* AVAILABILITY: HML Client Reference Lab Only \*\*****CPT Codes(s):** 84156**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Timed Urine (No Preservative)

SUBMIT: 10 mL aliquot of Timed Urine Collection (no preservative) REFRIGERATED.

UNACCEPTABLE: 24 hour collection.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

---

**Protein, Total****Panel Code: TPB****CPT Codes(s):** 84155**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed specimens.

---

**Protein/Creatinine Ratio, Random Urine****Panel Code: UPC**

Creatinine, Urine

Protein, Urine

Protein/Creatinine Ratio, calculation

**CPT Codes(s):** 82570, 84156**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.





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**Proteinase 3 (PR3) Antibody IgG****Panel Code: PR3****CPT Codes(s):** 83516**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon- Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.35 mL. Centrifuge and aliquot ASAP after collection.

UNACCEPTABLE: Gross hemolysis.

---

**PSA (Prostatic-Specific Antigen), Annual Screen****Panel Code: PSS****CPT Codes(s):** G0103**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 24 hours. May require ABN form.

NOTE: PSA Diagnostic (PSD) should be ordered when a diagnosis exists to support the medical necessity requirements. PSA Screening (PSS) should be ordered for all other requests. Medicare will pay for one screening test every 12 months on patients 50 years or older.

---

**PSA (Prostatic-Specific Antigen), Diagnostic****Panel Code: PSD****CPT Codes(s):** 84153**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 24 hours. May require ABN form.

NOTE: PSA Diagnostic should be ordered when a diagnosis exists to support the medical necessity requirements. PSA Screening should be ordered for all other requests. Medicare will pay for one screening test every 12 months on patients 50 years or older.



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**Pseudocholinesterase, Total****Panel Code: PSU****CPT Codes(s):** 82480**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

UNACCEPTABLE: Whole blood on clot. Hemolyzed specimens.

NOTE: Alternate specimens: Plasma from LAVENDER (EDTA). Plasma values are slightly lower than serum. Stable at Ambient: 4 hours, Refrigerated: 1 week, Frozen: 3 months.

---

**PT Inhibitor Screen****Panel Code: PTI****CPT Codes(s):** 85610, 85611**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Blue Top

SUBMIT: 3 mL whole blood or 1.5 mL platelet-free plasma ROOM TEMP within 4 hours of collection. Platelet-free plasma FROZEN within 4 hours of collection is stable for up to 2 weeks.

UNACCEPTABLE: Refrigerated or frozen whole blood specimen, partially filled, tube, marked hemolysis, clotted specimen, whole blood received &gt;4 hours of collection or platelet-free plasma not frozen within 4 hours of collection.

NOTE: A prothrombin time will be done first. If the result is normal the test will be cancelled. See the Specimen Collection section of this manual for preparation of platelet-free plasma.

---

**Pyruvic Acid, Whole Blood****Panel Code: PYP****CPT Codes(s):** 84210**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Tue Fri**Specimen:**

COLLECT: Perchloric Acid Preserved Blood (prechilled)

SUBMIT: 1 mL whole blood preserved in 2.5 mL of 6% perchloric acid REFRIGERATED.

NOTE: Collect 1 mL in syringe. Transfer exactly 1 mL whole blood to a prechilled vial containing 2.5 mL 6% perchloric acid (available from HML). Shake vigorously. Patient should be fasting at least 4 hours.



---

**Qualitative Creatinine, Body Fluid****Panel Code: CTF****\*\* AVAILABILITY: Hospital Inpatient Only \*\*****CPT Codes(s):** 82570**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 ml of pleural, thoracic, abdominal, ascites, wound or drainage fluid refrigerated up to 7 days at 2-8 C. Centrifuge to remove cellular material.

UNACCEPTABLE: Markedly hemolyzed specimens; CSF, synovial or joint fluid specimens cannot be tested.

NOTE: Specimen source is REQUIRED.

---

**Quantitative Creatinine, Body Fluid****Panel Code: LAB3054****CPT Codes(s):** 82570**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1.25 mL body fluid REFRIGERATED. Minimum volume 0.6 mL.

NOTE: Specimen source is REQUIRED. Centrifuge & aliquot to remove cellular material.  
Alternate specimen: Body fluid in Red Top or Green Top (lithium heparin).

---

**Rabies Antibody Endpoint****Panel Code: RBS****CPT Codes(s):** 86382**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 840 hours (35 days)**Days Test Performed:** Mon Wed Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 2.0 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimen.



---

**Rapid Strep A Screen-Throat****Panel Code: RST****CPT Codes(s):** 87880**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** All**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ REFRIGERATED. (Preferably send 2 swabs)

UNACCEPTABLE: Specimen more than 2 weeks old. Swab in semi-solid media, a swab with a wooden shaft or Eswabs.

NOTE: See the Specimen Collection section of this manual for collection instructions. If the Rapid Strep is negative and two swabs are received, a Group A Strep direct detection will be performed and charged separately using CPT code 87650.

---

**Rare Antisera Typing, Patient****Panel Code: RPT****CPT Codes(s):** 86905**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED.

UNACCEPTABLE: Incompletely or incorrectly labeled specimens.

NOTE: A separate CPT code 86905 will be charged for each antigen tested.

---

**Referral Sensitivity****Panel Code: ASA****CPT Codes(s):** 87186**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**DAYS TEST PERFORMED:** Sun- Sat**Specimen:**

COLLECT:

NOTE: Alternate specimen: culture slant. Filamentous fungal isolates should be well-contained (screw-cap tube) for safe transportation.



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**Renal Function Profile****Panel Code: RFP**

Albumin  
Anion Gap, Calculated  
BUN  
Calcium  
Carbon Dioxide (CO<sub>2</sub>), Total  
Chloride  
Creatinine  
Glomerular Filtration Rate, estimated (eGFR)  
Glucose  
Phosphorus  
Potassium  
Sodium

**CPT Codes(s):** 80069**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Centrifuge and separate serum from cells within 4 hours of draw. See the Special Instructions section of this manual for "Potassium Specimen Recommendations".

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**Renin Activity****Panel Code: REN****CPT Codes(s):** 84244**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: 2 Lav Tops (Plasma)

SUBMIT: 2 mL plasma FROZEN immediately in a separate tube. Minimum volume 1.2 mL. Do NOT collect in refrigerated tubes. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Serum. Specimens collected in citrate, heparin, or oxalate. Hemolyzed specimens.

NOTE: Collect midmorning after patient has been sitting, standing, or walking for at least 2 hours and seated for 5-15 minutes. Refer to the Additional Technical Information for specific patient preparation recommendations (<http://ltd.aruplab.com/Tests/Pdf/157>).

Reference ranges based on normal sodium diet.



**Respiratory Panel PCR, Nasopharyngeal****Panel Code: LAB3232****CPT Codes(s):** 87633,87581,87486**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** FLOCKED SWAB IN UTM**SUBMIT:** Flocked swab in Universal Viral Transport Medium (nasopharyngeal collection)  
REFRIGERATED.**UNACCEPTABLE:** BAL, Calcium-alginate swabs (shown to inhibit PCR), dry or moistened cotton swabs, sputum or non-respiratory specimens. Sputum, tracheal aspirates, tissue and throat swabs are not acceptable.**NOTE:** Specimen source is REQUIRED. Specimen in universal viral transport media stable at room temperature up to 12 hours, 10 days refrigerated or 1 month frozen. This test detects Adenovirus, Coronavirus, Human Metapneumovirus, Human Rhinovirus/Enterovirus, Influenza A (H1, H3, 2009 H1N1), Influenza B, RSV A, RSV B, Parainfluenza (1, 2, 3, 4), Chlamydia pneumoniae and Mycoplasma pneumoniae.**Respiratory Virus Panel by PCR, Bronchial Wash****Panel Code: LAB3233****CPT Codes(s):** 87633**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Bronchoalveolar lavage or nasal wash in a sterile screw top container.**SUBMIT:** 2 mL bronchoalveolar lavage (BAL)/respiratory aspirate in sterile screw-top container  
REFRIGERATED. Minimum volume 0.5 mL.**UNACCEPTABLE:** Sputum or non-respiratory specimens. Nasopharyngeal swabs.**NOTE:** Specimen source is REQUIRED. Specimen in universal viral transport media stable Refrigerated up to 7 days or Frozen 1 month. This test detects Influenza A (H1 and H3, 2009 H1N1), Influenza B, RSV A, RSV B, Parainfluenza (1,2, and 3), Human Rhinovirus, Human Metapneumovirus, Adenovirus B/E and Adenovirus C.**Reticulocytes****Panel Code: ART****CPT Codes(s):** 85045**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:****COLLECT:** Lavender Top**SUBMIT:** 3 mL whole blood REFRIGERATED or ROOM TEMPERATURE if < 24 hours old.  
May require ABN form.**UNACCEPTABLE:** Volume less than 1 mL or greater than 24 hours old.

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**Rh Typing (HML)****Panel Code: RH****CPT Codes(s):** 86901**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** Tue Wed Thu Fri Sat**Specimen:**

COLLECT: EDTA-Lavender Top

SUBMIT: 4 mL whole blood REFRIGERATED; minimum volume 0.5 mL

UNACCEPTABLE: Incompletely or incorrectly labeled specimens. Specimens collected in SST® tube or more than 7 days old.

NOTE: If indicated, a Weak D(Du) test will be performed at no charge. STAT will be done at any time. Females of child bearing potential, who type Weak D(Du) positive will reflex a Genotype for RHD and be charged separately using CPT code 81403.

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**Rheumatoid Factor Quantitative****Panel Code: RQT****CPT Codes(s):** 86431**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED for up to 3 days. If not tested within 72 hours, FREEZE.

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**Riboflavin (Vitamin B2), Plasma****Panel Code: VB2****CPT Codes(s):** 84252**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Green Top(Fast &amp; Protect from Light)

SUBMIT: 1 mL plasma FROZEN in a separate amber tube. Protect from light.

UNACCEPTABLE: Specimen not protected from light or patient not fasting or markedly lipemic.

NOTE: Patient fasting 12 hours.



**Rickettsia rickettsii (Rocky Mountain Spotted Fever) Antibodies, IgG & IgM by IFA****Panel Code: SPT****CPT Codes(s):** 86757 x2**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, hemolyzed, or severely lipemic specimens.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent."

**Risperidone (Risperdal®) and 9-Hydroxyrisperidone****Panel Code: RSP**

9-Hydroxyrisperidone

**CPT Codes(s):** 80342**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 168 hours (7 days)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 3 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are most reproducible.

**Rotavirus Antigen Stool****Panel Code: RTV****CPT Codes(s):** 87425**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** All**Specimen:**

COLLECT: Clean Screw-Top Container

SUBMIT: 0.5 mL OR 0.5 gm OR pea-size piece of stool REFRIGERATED.

UNACCEPTABLE: Stool in preservative or less than 0.2 mL stool. Specimen more than 72 hours old.





**RPR Titer****Panel Code: LAB3143**

**CPT Codes(s):** 86593  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** Mon-Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.8 mL serum REFRIGERATED. Minimum volume 0.4 mL. Centrifuge and aliquot ASAP.

**RSV Rapid Screen****Panel Code: RSV**

**CPT Codes(s):** 87807  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 2 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Nasal wash in screw-top container or nasopharyngeal swab using a mini-tip Eswab, REFRIGERATED.  
**SUBMIT:** Nasal wash in screw-top container or nasopharyngeal swab using a mini-tip Eswab. REFRIGERATED.  
**UNACCEPTABLE:** All Swab in non-liquid media.  
**NOTE:** See the Specimen Collection section of this manual for wash collection instructions.  
This test is intended only for patients under the age of 20 years old.

**Rubella Antibody, IGG****Panel Code: RUB**

**CPT Codes(s):** 86762  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.5 mL serum REFRIGERATED up to 7 days.

**Rubeola Antibody, IgG****Panel Code: RIS**

**CPT Codes(s):** 86765  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 72 hours (3 days)  
**Days Test Performed:** Mon Wed Fri

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 0.2 mL serum REFRIGERATED up to 9 days.  
**UNACCEPTABLE:** Markedly hemolyzed or lipemic specimen.



**Rupture of Fetal Membrane Screen****Panel Code: ROM****\*\* AVAILABILITY: St. John's & Woodwinds Hospital Only \*\*****CPT Codes(s):** s3628**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: ROM+ Vial

SUBMIT: ROM+ VAGINAL Swab Specimen Transport Tube ROOM TEMP for up to 6 hours.

UNACCEPTABLE: Storage &gt; 6 hours at room temperature.

NOTE: Test is available for hospital inpatient use only.

**Salicylate (ASA)****Panel Code: SAL****CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED.

**Schistosoma Antibody, IgG****Panel Code: SCI****CPT Codes(s):** 86682**Test Performed at:** ARUP LABS**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens.

**SCL-70 Auto Antibodies****Panel Code: ESL****CPT Codes(s):** 86235**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.



**Selenium, Serum or Plasma****Panel Code: SSE****CPT Codes(s):** 84255**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:****COLLECT:** Cent-Pour MetF**SUBMIT:** 2 mL serum from navy blue top (no additive) ROOM TEMPERATURE in a metal-free tube. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.**UNACCEPTABLE:** Separator tubes. Specimens that are not separated from the red cells or clot within 2 hours.**NOTE:** Diet, medication, and nutritional supplements may introduce interfering substances.

Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential over-the-counter medications for one week prior to sample draw. Centrifuge and pour off serum or plasma ASAP or within 2 hours of collection to an ARUP Trace Element-Free Transport Tube. Alternate specimen: Plasma from Navy Blue Top-EDTA (Lavender Band).

**Semen Analysis****Panel Code: SCT****CPT Codes(s):** 89322**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:****COLLECT:** Sterile Screw-Top Container**SUBMIT:** Total ejaculate in sterile screw-top container as close to BODY TEMPERATURE as possible. Specimen must arrive at the lab within 30 minutes after collection, between 7 a.m. and Noon MONDAY through THURSDAY. Must arrive at Mayo within 24 hours of collection.**UNACCEPTABLE:** Specimen collected in a condom containing spermicide. Specimen arriving after Noon or on Friday, Saturday, Sunday or the day before a holiday. If the holiday falls on a Saturday, holiday will be observed on the preceding Friday. Sunday holidays are observed on the following Monday. Specimen arriving >30 minutes after collection.**NOTE:** Time of collection is REQUIRED. Patient should have 2-7 days of sexual abstinence at the time of collection for accurate results.

**Semen, Post Vasectomy****Panel Code: PVS****CPT Codes(s):** 89321**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: Total ejaculate in sterile screw-top container as close to BODY TEMPERATURE as possible. Specimen must arrive as soon as possible after collection.

UNACCEPTABLE: Specimen collected in a condom containing spermicide. Specimen &gt; 8 hours old.

NOTE: Time of collection is REQUIRED.

**Serotonin****Panel Code: SER****CPT Codes(s):** 84260**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 2.5 mL serum REFRIGERATED in a separate tube. Remove serum from cells within 30 minutes.

NOTE: Medications that may affect serotonin concentrations include methyldopa, MAO inhibitors, lithium, morphine and reserpine

**Serotonin Release Assay (Heparin Dependent Platelet Antibody), Unfractionated Heparin****Panel Code: SRA**

Unfractionated Heparin, High Dose

Unfractionated Heparin, Low Dose

**CPT Codes(s):** 86022**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: 2 Red Tops

SUBMIT: 5 mL serum FROZEN. Minimum volume 1 mL.

UNACCEPTABLE: Ambient temperature.

NOTE: Specimen is stable Refrigerated 1 week.



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**Sex Hormone Binding Globulin****Panel Code: SHB****CPT Codes(s):** 84270**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.4 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Sample not separated from cells within 2 hours of collection.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin).

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**Sickle Cell Screen****Panel Code: SKL****CPT Codes(s):** 85660**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED. Specimen is stable refrigerated for up to six (6) weeks.

UNACCEPTABLE: Volume less than 1 mL.

NOTE: If necessary, any anticoagulated whole blood is acceptable.

---

**Sirolimus (Rapamune®)****Panel Code: SIR****CPT Codes(s):** 80195**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top (Whole Blood)

SUBMIT: 3 mL whole blood REFRIGERATED. Minimum volume 0.4 mL.

UNACCEPTABLE: Clotted specimen.

NOTE: Usual sampling time is immediately prior to next dose, but no sooner than 2 hours before. Do not process whole blood.



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**Sodium****Panel Code: NA****CPT Codes(s):** 84295**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED.

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**Sodium, 24 Hour Urine****Panel Code: NAU****CPT Codes(s):** 84300**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions.

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**Sodium, Random Urine****Panel Code: UNA****CPT Codes(s):** 84300**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.



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**Soluble Transferrin Receptor****Panel Code: STR**

**CPT Codes(s):** 84238  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1.0 mL serum REFRIGERATED. Minimum volume 0.3 mL.  
**UNACCEPTABLE:** Contaminated, severely hemolyzed, icteric, or lipemic specimens.  
**NOTE:** After separation from cells, specimen stable Refrigerated up to 1 week, Frozen 1 month (avoid repeated freeze/thaw cycles). Alternate specimen: Plasma from Green Top (lithium or sodium heparin) or Lavender Top (EDTA). People of African descent and those residing at 5,200 feet (1,600 meters) above sea level were found to have a 6% higher normal value. These differences were additive. Reference intervals have not been established for pregnant females, patients under 18 years of age, and recent or frequent blood donors.

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**Somatotropin (Growth Hormone)****Panel Code: GH**

**CPT Codes(s):** 83003  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top-Fast & Rest  
**SUBMIT:** 0.6 mL serum FROZEN. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.  
**UNACCEPTABLE:** Sample not separated from cells within 2 hours of collection.  
**NOTE:** Patient must be fasting and at complete rest for 30 minutes prior to collecting sample.

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**Specific Gravity, Body Fluid****Panel Code: SGF**

**CPT Codes(s):** 84315  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Body Fluid in a Screw-Top Container  
**SUBMIT:** 1 mL body fluid REFRIGERATED.  
**UNACCEPTABLE:** Specimen > 24 hours old.  
**NOTE:** Specimen source is REQUIRED.

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**Specific Gravity, Urine****Panel Code: SPG****CPT Codes(s):** 81003**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 3 mL aliquot of random urine collection (no preservative) REFRIGERATED within 24 hours of collection.

UNACCEPTABLE: Specimen &gt; 24 hours old.

**SS-A/RO Auto Antibodies****Panel Code: ESA****CPT Codes(s):** 86235**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt; 5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.

**SS-B/LA Auto Antibodies****Panel Code: ESB****CPT Codes(s):** 86235**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Tue**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. FROZEN if not submitted within 5 days.

UNACCEPTABLE: Specimens &gt;5 days old if not frozen. Body fluids are unacceptable.

NOTE: Serum may be stored up to 2 days at room temperature.

**St. Louis Encephalitis Antibody, IgG and IgM****Panel Code: STL****CPT Codes(s):** 86653 x2**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue WedThu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: CSF, markedly hemolyzed or lipemic specimen.





**Stone Formation, 24 Hour Urine****Panel Code: SSU**

Calcium, Urine 24hr  
Chloride, Urine 24hr  
Citrate, Urine 24hr  
Creatinine, Urine 24 hr  
Oxalate, Urine, 24hr  
pH, Urine  
Phosphorus, Urine 24 hr  
Potassium, Urine 24hr  
Sodium, Urine 24hr  
Uric Acid, Urine 24hr

**CPT Codes(s):** 82340, 82436, 82507, 82570, 83735, 83945, 83986, 84105, 84133, 84300, 84560

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** Tue Thu

**Specimen:**

**COLLECT:** 24 Hour Urine (No Preservative)

**SUBMIT:** Four 10 mL aliquots of 24 hour collection REFRIGERATED.

**UNACCEPTABLE:** Specimen not kept refrigerated during the collection time or transport.

**NOTE:** Total volume (mL) REQUIRED.

**Streptococcus pneumoniae IgG Antibodies, 23 Serotypes****Panel Code: N23**

**CPT Codes(s):** 86317 x23

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 144 hours (6 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 0.5 mL serum REFRIGERATED.

**UNACCEPTABLE:** Markedly hemolyzed or lipemic serum.

**Streptolysin O Antibody****Panel Code: ASO**

**CPT Codes(s):** 86060

**Test Performed at:** FAIRVIEW LABORATORY

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** twice/week

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 0.3 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot within 2 hours of collection.

**UNACCEPTABLE:** Samples not separated from cells within 2 hours of collection.

**NOTE:** Paired serum samples (acute and convalescent) are preferred. DNase-B Antibody and Streptolysin O Antibody (ASO) tests are generally ordered concurrently.



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**Striated Muscle Antibody****Panel Code: ASM****CPT Codes(s):** 83520**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL (minimum volume) serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed, lipemic or icteric specimen.

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**Strongyloides Antibody, IgG by ELISA, Serum****Panel Code: LAB3049****CPT Codes(s):** 86682**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.3mL.

UNACCEPTABLE: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, or lipemic specimens.

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**Sulfate, Urine****Panel Code: SUF****CPT Codes(s):** 84392**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Wed Fri Sun**Specimen:**

COLLECT: 24 Hour Urine (no preservative)

SUBMIT: 4 mL aliquot (from well mixed 24 hour urine collection) FROZEN immediately in a separate ARUP Transport Tube. REFRIGERATE specimen during collection. Minimum volume 2 mL.

UNACCEPTABLE: Room temperature or refrigerated specimens. Any sample except urine.

NOTE: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

Total volume (mL) and collection time interval (hours) REQUIRED.

Refrigerate during 24 hour collection. See the Specimen Collection section of this manual for collection instructions. DO NOT freeze entire collection.



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**Syphilis Screen, Cascade****Panel Code: RPR****CPT Codes(s):** 86780**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED. FROZEN in a separate tube if not submitted within 7 days. Centrifuge and aliquot within 2 hours of collection. May require ABN form.  
Minimum volume is 1.5 ml if all reflex tests are required. Minimum volume is 0.220 ml for Syphilis Screen (Treponema Antibody) only.

UNACCEPTABLE: Refrigerated specimen more than 7 days old. Cord blood specimens and spinal fluid are unacceptable.

NOTE: If Treponema Antibody (Syphilis) is positive or equivocal, RPR will be performed and charged separately using CPT code 86592.

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**T- and B-Cell Extended Helper/Suppressor Panel, Blood****Panel Code: EHS****CPT Codes(s):** 86355, 86357, 86359, 86360**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Lavender Top

SUBMIT: 4 mL whole blood ROOM TEMP. Specimen to be collected Monday through Thursday only and not on the day before a holiday. Specimen must arrive before 2 PM.

UNACCEPTABLE: Refrigerated, clotted, or markedly hemolyzed specimen.

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**T3 (Triiodothyronine), Free****Panel Code: T3F****CPT Codes(s):** 84481**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 6 days. May require an ABN form.



**T3, Total****Panel Code: T3T**

**CPT Codes(s):** 84480  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED up to 6 days. May require ABN form.

**T4, Free****Panel Code: FT4**

**CPT Codes(s):** 84439  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED up to 6 days. May require ABN form.

**T4, Total****Panel Code: T4**

**CPT Codes(s):** 84436  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 4 hours  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED up to 6 days. May require ABN form. Pediatric minimum volume is 125 uL.

**Tacrolimus (PROGRAF®) Level****Panel Code: TAC**

**CPT Codes(s):** 80197  
**Test Performed at:** FAIRVIEW LABORATORY  
**Analytic Time:** 24 hours (1 day)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Lavender Top (Whole Blood)  
**SUBMIT:** 4 mL whole blood ROOM TEMPERATURE. Minimum volume 0.4 mL.  
**UNACCEPTABLE:** Clotted specimen or centrifuged specimen.  
**NOTE:** Usual sampling time is immediately prior to next dose.



**Tapentadol and Metabolite, Urine, Quantitative****Panel Code: LAB3214**

N-desmethyltapentadol (qualitative only)  
Tapentadol  
Tapentadol glucuronide  
Tapentadol-O-Sulfate (qualitative only)

**CPT Codes(s):** 80372

**Test Performed at:** ARUP LABS

**Analytic Time:** 144 hours (6 days)

**Days Test Performed:** Sun Wed Fri

**Specimen:**

**COLLECT:** Random Urine in a Screw-Top Container

**SUBMIT:** 2 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.

Minimum volume 1.0 mL

**UNACCEPTABLE:** Specimens exposed to repeated freeze/thaw cycles.

**NOTE:**

**Testosterone, Free and Total****Panel Code: FTS**

Free Testosterone, Calculated  
Sex Hormone Binding Globulin  
Total Testosterone

**CPT Codes(s):** 84403,84270

**Test Performed at:** FAIRVIEW LABORATORY

**Analytic Time:** 72 hours (3 days)

**Days Test Performed:** Mon - Fri

**Specimen:**

**COLLECT:** RedTopSerum(1 mLx2 tubes)

**SUBMIT:** 2 mL serum REFRIGERATED (1 mL in each of two tubes). Minimum volume 0.4 mL in each of 2 tubes. Centrifuge and aliquot within 2 hours of collection.

**UNACCEPTABLE:** Hemolyzed specimen. Gold gel containers are not acceptable due to a clot activator that interferes with this assay. Sample not separated from cells within 2 hours of collection.

**Testosterone, Total****Panel Code: TSE**

**CPT Codes(s):** 84403

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 24 hours (1 day)

**Days Test Performed:** Mon Wed Fri

**Specimen:**

**COLLECT:** Red Top

**SUBMIT:** 1 mL serum REFRIGERATED up to 7 days.

**NOTE:** No reference ranges established for <21 years of age. Thus, <21 years will be sent to Fairview.



**Testosterone, Total (TEST <21 yr)****Panel Code: LAB3153****CPT Codes(s):** 84403**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon-Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.2 mL.

UNACCEPTABLE: Collection in gold gel container.

NOTE: For HML SO department use only. HML has no reference ranges established for &lt;21 years of age. Thus, &lt;21 years will be sent to Fairview.

**Tetanus Antibody****Panel Code: LAB3023****CPT Codes(s):** 86774**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 168 hours (7 days)**Days Test Performed:** once per week**Specimen:**

COLLECT: Red Top

SUBMIT: 0.6 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Grossly lipemic, hemolyzed or icteric samples. Heat-inactivated samples. Samples not separated from cells within 2 hours of collection.

NOTE: A pre-immunization and 1-3 month post immunization specimen are recommended.

**THC (Marijuana ) Screen, Qualitative, Urine****Panel Code: THC****CPT Codes(s):** 80307**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED up to 5 days.

NOTE: This test is not intended for medico-legal purposes.



**THC Metabolite, Urine, Quantitative****Panel Code: LAB3165****CPT Codes(s):** 80349**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot random urine collection (no preservative), Refrigerated. (0.5 mL minimum).

NOTE: Stable refrigerated or frozen. For medical purposes only; not valid for forensic use. The drug analyte detected in this assay, 9-carboxy THC, is a metabolite of delta-9-tetrahydrocannabinol (THC). Detection of 9-carboxy THC suggests use of, or exposure to, a product containing THC. This test cannot distinguish between prescribed or non-prescribed forms of THC, nor can it distinguish between active or passive use. The 9-carboxy THC metabolite can be detected in urine for several weeks. Normalization of results to creatinine concentration can help document elimination or suggest recent use, when specimens are collected at least one week apart.

**Theophylline (Theo-dur®)****Panel Code: THE****CPT Codes(s):** 80198**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. May require ABN form.

UNACCEPTABLE: Specimen collected in an SST® tube.

**Thiocyanate, Serum****Panel Code: TCY****CPT Codes(s):** 84430**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 120 hours (5 days)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube, markedly hemolyzed specimen.

NOTE: Useful for determining toxicity during prolonged nitroprusside therapy.



**Thiopurine Methyltransferase, RBC****Panel Code: LAB3058****CPT Codes(s):** 82657**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Lavender Top (Whole Blood)

SUBMIT: 5 mL whole blood in original tube REFRIGERATED. Minimum volume 3 mL.

UNACCEPTABLE: Gel separator tubes. Specimens collected in sodium fluoride/potassium oxalate (gray). Hemolyzed, frozen, or room temperature specimens.

NOTE: Green Top (Sodium or Lithium Heparin) whole blood are acceptable specimen types.

\* TPMT enzyme activity can be inhibited by several drugs such as: naproxen (Aleve), ibuprofen (Advil, Motrin), ketoprofen (Orudis), furosemide (Lasix), sulfasalazine (Azulfidine), mesalamine (Asacol), olsalazine (Dipentum), mefenamic acid (Ponstel), thiazide diuretics, and benzoic acid inhibitors. TPMT inhibitors may contribute to falsely low results; patients should abstain from these drugs for at least 48 hours prior to TPMT testing.

**Thrombin Time (TT)****Panel Code: TT****CPT Codes(s):** 85670**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN within 4 hours.

UNACCEPTABLE: Tube not completely filled or specimen is clotted.

NOTE: If the patient's hematocrit is &gt;55%, contact HML to obtain a special collection container.

Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

**Thyroglobulin Antibody****Panel Code: ATG****CPT Codes(s):** 86800**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED. Minimum volume 0.3 mL

UNACCEPTABLE: EDTA plasma. Grossly hemolyzed or lipemic specimens.

NOTE: Alternate specimen: Plasma from Green Top (lithium heparin).





**Thyroglobulin, Serum or Plasma with Reflex to LC-MS/MS or CIA****Panel Code: TGL**

Thyroglobulin Antibody

**CPT Codes(s):** 84432, 86800**Test Performed at:** ARUP LABS**Analytic Time:** 168 hours (7 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top-3 mL Serum

SUBMIT: 3 mL serum FROZEN. Minimum volume 1.5 mL.

NOTE: Alternate specimen: Plasma from Green Top (lithium or sodium heparin).

After separation from cells, specimen is stable at Room Temperature 8 hours,  
Refrigerated 1 week, Frozen 6 months.

If negative for thyroglobulin antibodies, then Thyroglobulin by chemiluminescent immunoassay (CIA) will be performed and charged separately using CPT code 84432. If thyroglobulin antibodies &gt;4.0 IU/mL, then Thyroglobulin by high-performance liquid chromatography-tandem mass spectrometry (LC-MS/MS) will be performed and charged separately using CPT code 84432.

**Thyroid Cascade****Panel Code: TYC**

TSH

**CPT Codes(s):** 84443**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 6 days. May require ABN form.

UNACCEPTABLE: Markedly hemolyzed specimen.

NOTE: If TSH is abnormal, then T4 Free will be performed and charged separately using CPT code 84439.

**Thyroid Peroxidase Antibody****Panel Code: TPX****CPT Codes(s):** 86376**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** Tue Thu**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 3 days, then FREEZE. May require ABN form.



**Thyroid Stimulating Hormone Receptor Antibody (TRAb)****Panel Code: TRE**

**CPT Codes(s):** 83520  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection (allow tube to clot at Room Temperature for 15-20 minutes).  
**UNACCEPTABLE:** Plasma. Grossly hemolyzed or lipemic specimens.  
**NOTE:** Separate specimens must be submitted when multiple tests are ordered.  
Specimen is stable at Room Temperature 24 hours, Refrigerated 72 hours, Frozen 1 month.

**Thyroid-Stimulating Immunoglobulin****Panel Code: TSI**

**CPT Codes(s):** 84445  
**Test Performed at:** ARUP LABS  
**Analytic Time:** 48 hours (2 days)  
**Days Test Performed:** All

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum FROZEN. Minimum volume 0.5 mL. Allow specimen to clot completely at room temperature. Centrifuge and aliquot within 2 hours of collection.  
**NOTE:** Alternate specimens: Plasma from GREEN TOP (LIHEP) or LAVENDER (EDTA). After separation from cells, stable at Ambient: 24 hours, Refrigerated: 1 week, Frozen: 1 year.

**Tissue Transglutaminase, IgA & IgG****Panel Code: TGA**

Tissue Transglutaminase IgA AB  
Tissue Transglutaminase IgG AB

**CPT Codes(s):** 83516 x2  
**Test Performed at:** HealthEast Medical Laboratory  
**Analytic Time:** 120 hours (5 days)  
**Days Test Performed:** Mon Thu

**Specimen:**

**COLLECT:** Red Top  
**SUBMIT:** 1 mL serum REFRIGERATED. FROZEN if not submitted within 48 hours.  
**UNACCEPTABLE:** Specimens > 48 hours old not frozen. Markedly hemolyzed or lipemic specimens.



**Tobramycin (Nebcin®)****Panel Code: TOB****CPT Codes(s):** 80200**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Specimen collected in an SST® tube.

**NOTE:** Date and time of last dose are REQUIRED. **PEAK Specimen:** Draw blood 30 minutes after intramuscular dose or 15 minutes after intravenous dose. **TROUGH specimen:** Draw blood 15 minutes before next dose. Label specimen appropriately (peak or trough AND collection time).**Topiramate (Topamax®)****Panel Code: TPR****CPT Codes(s):** 80201**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.3 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Serum or plasma separator tubes. Grossly hemolyzed specimens.

**NOTE:** Preferred specimen is pre-dose (trough) draw - at steady state concentration. Alternate specimen: Plasma from Lavender Top (EDTA) or Green Top (lithium or sodium heparin).**Toxoplasma gondii Antibodies, IgG and IgM****Panel Code: LAB3069****CPT Codes(s):** 86777, 86778**Test Performed at:** ARUP LABS**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum REFRIGERATED. Minimum volume 0.5 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Plasma or urine. Contaminated, heat-inactivated or grossly hemolyzed specimens.

**NOTE:** Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent." Allow specimen to clot completely at room temperature.

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**TPN Panel****Panel Code: TPN****CPT Codes(s):** 80069, 82247, 83735, 84075, 84134, 84155, 84450, 84478**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Collect: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Keep out of light as much as possible. May require ABN form.

UNACCEPTABLE: Hemolyzed specimen.

NOTE: Centrifuge and separate serum from cells within 4 hours of draw. See Appendix for Potassium Specimen Recommendations.

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**Tramadol and Metabolite, Urine, Quantitative****Panel Code: TRM**

O-desmethyltramadol

Tramadol

**CPT Codes(s):** 80373**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

Submit: 2 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.  
Minimum volume 1 mL.

UNACCEPTABLE: Specimens exposed to repeated freeze/thaw cycles.

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**Transferrin****Panel Code: TRN****CPT Codes(s):** 84466**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 3 days, then FREEZE. May require ABN form.



**Trazodone (Desyrel®)****Panel Code: TRZ****CPT Codes(s):** 80338**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Recommended collection is 12 hours post dose (trough) following a minimum of 5 days on trazodone.

**Treponema pallidum (VDRL), Cerebrospinal Fluid  
with Reflex to Titer****Panel Code: VSF****CPT Codes(s):** 86592**Test Performed at:** ARUP LABS**Analytic Time:** 48 hours (2 days)**Days Test Performed:** All**Specimen:**

COLLECT: Spinal Fluid in CSF Collection Tube

SUBMIT: 0.5 mL spinal fluid REFRIGERATED. Minimum volume 0.4 mL.

UNACCEPTABLE: Plasma, serum, or other body fluids.

NOTE: If VDRL is weakly reactive or reactive, then a VDRL titer (CPT Code 86593) will be performed at an additional charge. Specimen stable Refrigerated 2 weeks, Frozen 1 year (avoid repeated freeze/thaw cycles).

**Tricyclic Antidepressants, Quantitative, Urine****Panel Code: LAB3204**

Amitriptyline

Clomipramine

Desipramine

Doxepin

Imipramine

Norclomipramine

Nordoxepin

Nortriptyline

Protriptyline

**CPT Codes(s):** 80337**Test Performed at:** ARUP LABS**Analytic Time:****Days Test Performed:** Tue Thu Sat**Specimen:**

COLLECT: Random Urine (2mL)

SUBMIT: 2 mL random urine (no preservative) in ARUP standard transport tubes REFRIGERATED. Minimum volume 0.7 mL.

NOTE: Test useful for follow-up of presumptive results or for monitoring compliance.



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**Triglycerides****Panel Code: TRG****CPT Codes(s):** 84478**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top (Fasting)

SUBMIT: 1 mL serum REFRIGERATED up to 7 days. May require ABN form.

UNACCEPTABLE: Markedly hemolyzed specimen.

NOTE: Patient fasting 12-14 hours.

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**Triglycerides, Body Fluid****Panel Code: TGF****CPT Codes(s):** 84478**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Body Fluid in a Screw-Top Container

SUBMIT: 1 mL body fluid REFRIGERATED up to 7 days.

NOTE: Specimen source is REQUIRED.

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**Triiodothyronine (T3), Reverse****Panel Code: RT3****CPT Codes(s):** 84482**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 2 mL serum FROZEN. Minimum volume 1 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Grossly hemolyzed specimens.

NOTE: Specimen stable Refrigerated 1 week, Frozen 3 months. Alternate specimen: Plasma from Lavender Top (EDTA).



**Tropheryma whipplei DNA by PCR****Panel Code: WIP****CPT Codes(s):** 87798**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Sterile Screw-Top Container

SUBMIT: 0.5 mL CSF or synovial fluid in a sterile screw-top container FROZEN or REFRIGERATED.

UNACCEPTABLE: Room temperature CSF, synovial fluid or blood specimens.

**Troponin I****Panel Code: TRO****CPT Codes(s):** 84484**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 72 hours. Frozen specimens are acceptable up to 7 days.

**Tryptase****Panel Code: TRY****CPT Codes(s):** 83520**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 96 hours (4 days)**Days Test Performed:** once or twice/week**Specimen:**

COLLECT: Red Top

SUBMIT: 1.0 mL serum REFRIGERATED. Minimum volume 0.5 mL.

NOTE: Allow serum to clot completely at room temperature. Separate serum from cells ASAP or within 2 hours of collection.

**TSH****Panel Code: TSH****CPT Codes(s):** 84443**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Red Top

SUBMIT: 1 mL serum REFRIGERATED; FROZEN if not submitted within 7 days. May require ABN form. Pediatric minimum volume is 300 uL.

UNACCEPTABLE: Markedly hemolyzed specimen.



**Tumor Necrosis Factor, Plasma****Panel Code: TNF****CPT Codes(s):** 83520**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Thu**Specimen:**

COLLECT: LAV(wet ice)Plasma frz

SUBMIT: 1 mL serum FROZEN immediately in a separate tube.

UNACCEPTABLE: Not received frozen, SST tube, markedly hemolyzed, lipemic or icteric specimen.

**UGT1A1 TA Repeat Genotype****Panel Code: LAB3067****CPT Codes(s):** 81350**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thur Fri**Specimen:**

COLLECT: Lavender Top (Whole Blood)

SUBMIT: 3 mL Lavender Top (EDTA) in original tube at ROOM TEMPERATURE.

NOTE: Patients who have received a heterologous blood transfusion within the preceding 6 weeks, or who have received an allogeneic blood or marrow transplant, can have inaccurate genetic test results due to presence of donor DNA.

**Urea Nitrogen, 24 Hour Urine****Panel Code: UNU****CPT Codes(s):** 84540**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and acceptable preservatives.

**Urea Nitrogen, Random Urine****Panel Code: UUN****CPT Codes(s):** 84540**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED.





**Ureaplasma PCR****Panel Code: UMP**

Ureaplasma parvum PCR  
Ureaplasma urealyticum PCR

**CPT Codes(s):** 87798 x 2

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Sterile Screw-Top Container

**SUBMIT:** SWAB: Cervical, urethral or vaginal. Dacron or rayon swab with aluminum or plastic shaft. FLUID: 1-2 mL sterile screw top. Respiratory (neonate only < 3 mos), reproductive, synovial. URINE: 2 mL - 10 mL REFRIGERATED.

**UNACCEPTABLE:** Wooden shaft, cotton swab, dry swab, Port-a-Cul™ tube, swab containing gel or charcoal, calcium-alginate tipped swabs.

**NOTE:** Specimen source is REQUIRED.

**Ureaplasma species, Molecular Detection, PCR,  
Blood****Panel Code: LAB3091**

**CPT Codes(s):** 87798 x 2

**Test Performed at:** Mayo Medical Laboratories

**Analytic Time:** 96 hours (4 days)

**Days Test Performed:** Mon Tue Wed Thu Fri

**Specimen:**

**COLLECT:** Lavender, Whole Blood

**SUBMIT:** 1 mL whole blood REFRIGERATED in original tube.

**Uric Acid****Panel Code: URA**

**CPT Codes(s):** 84550

**Test Performed at:** HealthEast Medical Laboratory

**Analytic Time:** 4 hours

**Days Test Performed:** All

**Specimen:**

**COLLECT:** IP Green Top / OP Red Top

**SUBMIT:** 1 mL serum REFRIGERATED.



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**Uric Acid, 24 Hour Urine****Panel Code: UAU****CPT Codes(s):** 84560**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 24 Hour Urine (No Preservative)

SUBMIT: 10 mL aliquot of 24 hour urine collection (no preservative) REFRIGERATED. Must be received in lab within 4 hours of collection.

NOTE: Total volume (mL) REQUIRED. See the Specimen Collection section of this manual for collection instructions and acceptable preservatives.

---

**Uric Acid, Random Urine****Panel Code: UUA****CPT Codes(s):** 84560**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 10 mL aliquot of random urine collection (no preservative) REFRIGERATED. Must be received in lab within 4 hours of collection.

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**Uric Acid, Rasburicase****Panel Code: UAR****CPT Codes(s):** 84550**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: 1 PRECHILLED Li Hep green(into ice bath)

SUBMIT: 1 mL plasma in green top primary tube on wet ice, centrifuged and analyzed within 4 hours.

UNACCEPTABLE: Specimen that is hemolyzed, not drawn into prechilled tubes, not kept on wet ice, not centrifuged and run within 4 hours.

NOTE: Blood should be drawn into a prechilled green and placed immediately into an ice bath until it is centrifuged at refrigerator temperature. The centrifuged specimen must be analyzed within 4 hours of draw. Patients must have this processing protocol followed for all uric acid orders for 96 hours(4 days) post all Rasburicase doses.



**Urinalysis Macro reflex Micro UC if indicated****Panel Code: UAI****CPT Codes(s):** 81001**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top OR Boricon Container

SUBMIT: 10 mL urine in sterile screw-top REFRIGERATED OR 20 mL urine in boricon container ROOM TEMP or REFRIGERATED. Maintain sterility. May require ABN form.

UNACCEPTABLE: Unpreserved urine &gt;24 hr refrigerated or &gt;4 hr room temp. &lt;5 mL urine will not be analyzed microscopically. Not orderable or acceptable for children &lt;12 yr or obstetric patients.

NOTE: If UA results indicate (Leukesterase: positive, Nitrite: positive WBC: &gt;=5/HPF, Bacteria: &gt;Few/HPF), a UC will be performed and charged separately using CPT Code 87086. If urine microscopic is done, use CPT Code 81001. If urine microscopic is not done, use CPT Code 81003.

**Urinalysis, Macro & Microscopic****Panel Code: UAM****CPT Codes(s):** 81001**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top or Boricon Container

SUBMIT: 10 mL random urine in sterile screw top container REFRIGERATED or 20 mL in a boricon container sent at ROOM TEMP or REFRIGERATED.

UNACCEPTABLE: Volumes less than 5 mL will not be analyzed. Unpreserved urine &gt;24 hr refrigerated or &gt;4 hr room temp.

NOTE: Test is not available for hospital registered patients.

**Urinalysis, Macro reflex Micro****Panel Code: UA****CPT Codes(s):** 81015, 81003**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Screw-Top or Boricon Container

SUBMIT: 10 mL urine in sterile screw-top REFRIGERATED OR 20 mL urine in boricon container ROOM TEMP or REFRIGERATED. Maintain sterility. May require ABN form.

UNACCEPTABLE: Unpreserved urine &gt;24 hr refrigerated or &gt;4 hr room temp. Specimens with less than 5 mL of urine will not be analyzed microscopically.

Note: If urine microscopic is performed, use CPT Code 81001. If urine microscopic is not performed, use CPT Code 81003.



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**UroVysion for Detection of Bladder Cancer****Panel Code: LAB3036****CPT Codes(s):** 88120**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 168 hours (7 days)**Days Test Performed:** All**Specimen:**

COLLECT: ThinPrep Urocyte(PreservCyt)

SUBMIT: Random urine (33-60 mL) preserved with PreservCyt solution REFRIGERATED. (Kit available from HML).

NOTE: Collect random urine (Recommend 30 mL). If greater than 60 mL pour off excess.

Carefully add contents of PreservCyt solution into specimen cup.

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**Valproic Acid (Depakene®)****Panel Code: VAL****CPT Codes(s):** 80164**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 7 days.

UNACCEPTABLE: Specimen collected in an SST® tube.

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**Valproic Acid Free****Panel Code: VPA****CPT Codes(s):** 80165**Test Performed at:** MEDTOX (MTO)**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 3 mL serum REFRIGERATED.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Trough levels are most reproducible.



**Vancomycin (Vancocin®)****Panel Code: VAN****CPT Codes(s):** 80202**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: IP Green Top / OP Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED up to 8 days.

UNACCEPTABLE: Specimen collected in an SST® tube.

NOTE: Date and time of last dose are REQUIRED. PEAK Specimen: Draw blood 30 minutes after intramuscular dose or 15 minutes after intravenous dose. TROUGH specimen: Draw blood 15 minutes before next dose. Label specimen appropriately (peak or trough AND collection time).

**Vanillylmandelic Acid, Urine****Panel Code: VMA****CPT Codes(s):** 84585**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon - Fri**Specimen:**

COLLECT: Urine (No Preservative)

SUBMIT: 5 mL aliquot of random urine or 24 hour collection (no preservative) REFRIGERATED. Minimum volume 2 mL.

UNACCEPTABLE: Use of preservative. Insufficient amount of urine on the filter paper for infants.

NOTE: Alternate specimen for infants: Filter paper urine collection kit (obtain from laboratory) ROOM TEMPERATURE. Drugs such as L-dopa, dopamine, epinephrine and norepinephrine are metabolized to HVA and VMA and will fictitiously elevate their levels in the urine. Therefore, the patient should not be on such drugs when collecting the urine. Useful for diagnosis and monitoring treatment of neuroblastoma and pheochromocytoma. The combination of HVA and VMA will give the positive diagnosis in 92% of cases of neuroblastoma. More than 90% of patients with pheochromocytoma will have an elevated VMA. If both VMA and metanephrines are tested, >98% of patients with pheochromocytomas will be detected.

**Varicella Zoster Antibody, IgG****Panel Code: VIS****CPT Codes(s):** 86787**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 48 hours (2 days)**Days Test Performed:** Mon Wed Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED up to 5 days or freeze.

UNACCEPTABLE: Hemolyzed or lipemic specimen.



**Varicella-Zoster Virus DNA by PCR, CSF or Skin Swab****Panel Code: ZPC****CPT Codes(s):** 87798**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon, Wed, Fri**Specimen:**

COLLECT: Sterile Container or Swab in UTM

Submit: 0.5 mL CSF in sterile screw-top container OR flocked swab in Universal Viral Transport Medium (eye, nasal, throat, or dermal lesion/rash) REFRIGERATED. Minimum volume 0.2 mL.

Unacceptable: Specimens other than swab or CSF. Plasma, ocular fluid and tissue. Eswabs are not acceptable.

NOTE: Specimen source is REQUIRED. Do NOT centrifuge CSF.

**Vasoactive Intestinal Polypeptide (VIP), Plasma****Panel Code: VIP****CPT Codes(s):** 84586**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 192 hours (8 days)**Days Test Performed:** Mon Wed**Specimen:**

COLLECT: 1 Lavender Top (Fasting 8 hours)

SUBMIT: 1 mL plasma FROZEN immediately in a separate tube.

UNACCEPTABLE: Markedly hemolyzed, lipemic or specimen not frozen.

NOTE: Patient fasting 8 hours. Patient receiving recent radioactive materials should not be tested.

**Viral Culture, Respiratory****Panel Code: VCR****CPT Codes(s):** 87252**Test Performed at:** ARUP LABS**Analytic Time:** 336 hours (14 days)**Days Test Performed:** All**Specimen:**

COLLECT: Sterile Container

SUBMIT: 3 mL fluid [bronchoalveolar lavage (BAL), nasopharyngeal aspirate, washing, tracheal aspirate, or sputum] in a sterile screw-top container REFRIGERATED (minimum volume 0.5 mL) OR swab (throat or nasal), tissue (lung, etc.), or fluid in 3 mL ARUP viral transport media REFRIGERATED.

UNACCEPTABLE: Calcium alginate, eSwab, dry, or wood swabs. FROZEN specimen.

Specimen at ROOM TEMPERATURE more than 2 hours. Non-respiratory specimen.

NOTE: Specimen source is REQUIRED. Fluid is also acceptable in viral transport media.



**Vitamin A (Retinol), Serum or Plasma****Panel Code: VTA****CPT Codes(s):** 84590**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Red Top (Fasting)

SUBMIT: 1.0 mL serum FROZEN. Minimum volume 0.2 mL.

UNACCEPTABLE: Whole blood or body fluids other than serum or plasma. Ambient (room temperature) storage of specimen is unacceptable.

NOTE: Patient fasting 12 hours and abstain from alcohol for 24 hours prior to collection.

Separate serum or plasma within 1 hour of collection and freeze. Specimen is stable refrigerated but cannot be left at room temperature.

**Vitamin B1 (Thiamine), Whole Blood****Panel Code: VB1****CPT Codes(s):** 84425**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Green Top Whole Blood

SUBMIT: 3 mL whole blood from Green Top (Lithium Heparin) FROZEN in ARUP Standard Transport Tube. Minimum volume 0.6 mL.

UNACCEPTABLE: Any specimen other than whole blood. Plasma separator tubes. Glass tubes. Clotted or non-frozen specimens.

NOTE: Alternate specimen: Green Top (Sodium Heparin) or Lavender Top (EDTA) whole blood. CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

**Vitamin B12****Panel Code: B12****CPT Codes(s):** 82607**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 4 hours**Days Test Performed:** All**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED; FROZEN in a separate tube if not submitted within 7 days.

UNACCEPTABLE: Hemolyzed specimens.



**Vitamin B6 (Pyridoxal 5-Phosphate)****Panel Code: VB6****CPT Codes(s):** 84207**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Grn Top Plasma(Fast &amp; Protect from light)

SUBMIT: 1 mL plasma FROZEN in an amber tube (protect from light). Minimum volume 0.5 mL.

UNACCEPTABLE: Whole blood. Specimens not protected from light. Icteric specimens.

Storage at room temperature is unacceptable.

NOTE: Collect specimen after an overnight fast. Protect from light during collection, storage, and shipment. Plasma or serum must be removed from cells within 1 hour of collection.

**Vitamin D, Total (25-Hydroxy)****Panel Code: VID****CPT Codes(s):** 82306**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED for up to 5 days.

UNACCEPTABLE: Markedly hemolyzed or lipemic specimens.

**Vitamin E, Serum or Plasma****Panel Code: VTE****CPT Codes(s):** 84446**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** All**Specimen:**

COLLECT: Red Top (fasting)

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.2 mL. Centrifuge and aliquot within 1 hour of collection.

UNACCEPTABLE: Whole blood or body fluids other than serum or plasma.

NOTE: Patient should fast for 12 hours and abstain from alcohol for 24 hours prior to collection. Alternate specimen: Green Top (lithium or sodium heparin) or Lavender Top (EDTA). Avoid hemolysis.





**Vitamin K1, Serum****Panel Code: VK1****CPT Codes(s):** 84597**Test Performed at:** ARUP LABS**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sun**Specimen:**

COLLECT: Red Top,Fasting,Protect from Light

SUBMIT: 1.0 mL serum FROZEN in ARUP Amber Transport Tube. Minimum volume 0.6 mL.  
Centrifuge and aliquot within 1 hour of collection.UNACCEPTABLE: Hemolyzed specimens. Any specimen other than serum or EDTA plasma.  
Room Temperature specimens.

NOTE: Patient fasting 12 hours and should not consume alcohol for 24 hours prior to blood draw. Protect from light during collection, storage, and shipment. Alternate specimen: Plasma from Lavender Top (EDTA). Separate specimens must be submitted when multiple tests are ordered.

**Von Willebrand Antigen****Panel Code: VWA****CPT Codes(s):** 85246**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: Blue Top

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately.

UNACCEPTABLE: Specimen not received frozen.

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze.

\* Performed 2-4 times per week. Recommended testing for Von Willebrand Disease must be individually ordered and includes Factor 8, Von Willebrand Antigen and Von Willebrand Factor Activity Cascade.

**Von Willebrand Factor Activity w Reflex to RCA****Panel Code: LAB3053****CPT Codes(s):** 85245**Test Performed at:** FAIRVIEW LABORATORY**Analytic Time:** 168 hours (7 days)**Days Test Performed:** Varies**Specimen:**

COLLECT: 2 Blue Tops

SUBMIT: 1.0 mL platelet-free plasma FROZEN immediately in each of 2 tubes.

UNACCEPTABLE: Specimen not received frozen, specimen hemolyzed, icteric or lipemic.

NOTE: Centrifuge specimen for 30 minutes at 3000 rpm. Aliquot plasma and freeze. When VWF:Act to VWF:Ag ratio is  $\leq 0.70$  or VWF:Act  $\leq 50\%$  or VWF:Ag  $\leq 50\%$ , then Ristocetin Cofactor Activity(85245) will be performed and charged.

\* Performed 2-3 times per week. Recommended testing for Von Willebrand Disease must be individually ordered and includes Factor 8, Von Willebrand Antigen and Von Willebrand Factor Activity Cascade.



**WBC****Panel Code: WBC****CPT Codes(s):** 85048**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 24 hours (1 day)**Days Test Performed:** All**Specimen:**

COLLECT: Lavender Top

SUBMIT: 3 mL whole blood REFRIGERATED. Specimen must arrive within 24 hours of collection. May require ABN form.

UNACCEPTABLE: Specimen more than 24 hours old, frozen or clotted specimen, volume less than 1 mL.

**West Nile Virus Antibodies, IgG and IgM by ELISA,  
Serum****Panel Code: LAB3050****CPT Codes(s):** 86788, 86789**Test Performed at:** ARUP LABS**Analytic Time:** 144 hours (6 days)**Days Test Performed:** Tue Fri Sun**Specimen:**

COLLECT: Red Top

SUBMIT: 1 mL serum REFRIGERATED. Minimum volume 0.15 mL. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.

NOTE: Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as "acute" or "convalescent."

**West Nile Virus by PCR****Panel Code: WNP****CPT Codes(s):** 87798**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri**Specimen:**

COLLECT: SST® OR CSF in a sterile screw-top tube

SUBMIT: 1.0 mL serum or CSF FROZEN. Minimum volume 0.5 mL.

UNACCEPTABLE: Heparinized specimens.

NOTE: Specimen source REQUIRED.

Alternate specimen: Plasma from Lavender Top (EDTA) FROZEN.

Specimen stable Room Temperature 8 hours, Refrigerated 24 hours, Frozen 3 months.



**Western Equine Encephalitis Antibody, IgG an IgM****Panel Code: WEQ****CPT Codes(s):** 86654 x2**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 96 hours (4 days)**Days Test Performed:** Mon Tue Wed Thu Fri (May-Oct) | Mon Wed Fri (Nov-Apr)**Specimen:**

COLLECT: Red Top

SUBMIT: 0.5 mL serum REFRIGERATED.

UNACCEPTABLE: Markedly hemolyzed or lipemic

**Wet Prep****Panel Code: WET****CPT Codes(s):** 87210**Test Performed at:** HealthEast Medical Laboratory**Analytic Time:** 2 hours**Days Test Performed:** ALL**Specimen:**

COLLECT: CultureSwab™

SUBMIT: Swab in CultureSwab™ at ROOM TEMPERATURE or swab in saline less than 2 hours ROOM TEMPERATURE.

UNACCEPTABLE: Dry swab. CultureSwab older than 12 hours or refrigerated. Swab in saline older than 2 hours. Swab of vaginal discharge, swabs contaminated with lubricant.

NOTE: Collect specimen by swabbing vaginal wall.

**Zinc, Serum or Plasma****Panel Code: SZN****CPT Codes(s):** 84630**Test Performed at:** ARUP LABS**Analytic Time:** 72 hours (3 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat Sun**Specimen:**

COLLECT: Clot30 Cent-Pour MetF

SUBMIT: 2 mL serum from navy blue top (no additive) ROOM TEMPERATURE in a metal-free tube. Minimum volume 0.5 mL.

UNACCEPTABLE: Separator tubes. Specimens that are not separated from the red cells or clot. Hemolyzed specimens.

NOTE: Diet, medication, and nutritional supplements may introduce interfering substances.

Upon the advice of their physician, patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential over-the-counter medications for one week prior to sample draw. Centrifuge and pour off serum or plasma ASAP or within 2 hours of collection to an ARUP Trace Element-Free Transport Tube.



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**Zolpidem, Urine, Quantitative****Panel Code: LAB3213**

Zolpidem

**CPT Codes(s):** 80368**Test Performed at:** ARUP LABS**Analytic Time:** 96 hours (4 days)**Days Test Performed:** All**Specimen:**

COLLECT: Random Urine in a Screw-Top Container

SUBMIT: 1 mL aliquot of random urine collection (no preservative). ROOM TEMPERATURE.

Minimum volume 0.3 mL

UNACCEPTABLE: Specimens exposed to repeated freeze/thaw cycles.

NOTE:

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**Zonisamide (Zonegran®)****Panel Code: ZON****CPT Codes(s):** 80203**Test Performed at:** Mayo Medical Laboratories**Analytic Time:** 120 hours (5 days)**Days Test Performed:** Mon Tue Wed Thu Fri Sat**Specimen:**

COLLECT: Plain Red Top

SUBMIT: 1 mL serum REFRIGERATED. Centrifuge and aliquot within 2 hours of collection.

UNACCEPTABLE: SST tube.

NOTE: Recommended collection is 30 minutes before next dose.



