



Laboratory
Test
Catalog



Bio-Center
Laboratory

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Table of Contents

Introduction to Our Services	3	Progesterone	10
Licensure / Certification	3	Parathyroid Hormone (PTH)	10
Proficiency Testing	3	PSA, Total	10
Policies	3	Pyrroles, Urine	11
Client Billing	3	Pyrroles, Urine (3 collections)	11
Client Billing Options	4	RBC Elements Profile #1	11
Drawing and Processing Specimens	4	RBC Elements Profile #2	11
Specimen Submittal and Shipping	5	Selenium, RBC	11
Amino Acid, Essential	6	Selenium, Serum	11
Amino Acid, Fractionated	6	Strontium, Urine	11
Beta Carotene	6	T3, Free (Unbound)	12
Boron, Urine	6	T4, Free (Direct)	12
Cholesterol, Total	6	Testosterone	12
Chromium, Serum	6	Thyroid Antibodies	12
Coenzyme Q10	6	Thyroid Panel	12
Complete Blood Count with Differential (CBC)	7	TSH	12
Copper, RBC	7	Urinalysis + Urine Vitamin C	12
Copper, Serum	7	Vitamin A	13
C-Reactive Protein (CRP) –High Sensitivity	7	Vitamin A, C, E Mini Profile	13
DHEA	7	Vitamin A, C, E, B12, Folate Profile	13
Estradiol	7	Vitamin A, E, Beta Carotene, Lutein, Lycopene Profile	13
Fatty Acids, RBC	8	Vitamin B1	13
Ferritin	8	Vitamin B12	13
Folate (Folic Acid)	8	Vitamin B12, Folate Profile	13
Glucose	8	Vitamin B2	13
Glucose 6-Phosphate Dehydrogenase (G6PD)	8	Vitamin B6	14
Glutathione RBC	8	Vitamin C, Plasma	14
Glycemic Profile	9	Vitamin C, Plasma - Post IVC Specimen	14
Hemoglobin (Hgb) A1c	9	Vitamin C Screen, Urine	14
Homocysteine	9	Vitamin D, 25-Hydroxy	14
Indican, Urine	9	Vitamin E	15
Insulin	9	Yeast Species (Oral)	15
Lipid Profile	9	Zinc, RBC	15
Lutein	10	Zinc, Serum	15
Lycopene	10		
Magnesium, RBC	10		
Magnesium, Serum	10		
Manganese, RBC	10		
Manganese, Serum	10		

Bio-Center Laboratory (BCL)

Introduction to Our Services

Bio-Center Laboratory (BCL) was established in 1975 and has been dedicated to providing accurate clinical assays focusing on nutritional medicine. The Bio-Center Laboratory specializes in a wide variety of nutritional tests including many vitamins, minerals, red blood cell fatty acids, amino acids, and urine pyrroles.

Client service representatives are available Monday through Thursday from 8am to 5pm and Friday 9am to 4pm CST. BCL toll free telephone number is 800-494-7785. For local calls, please call 316-684-7784. BCL fax number is 316-682-2062.

Licensure / Certification

CLIA 17D0648333

Medicare 008052

Federal ID 48-0840415

Proficiency Testing

College of American Pathologists: Trace Metals

American Proficiency Institute: Chemistry, Parasitology, Hematology, Urinalysis, Special Chemistries and Tumor Markers surveys.

Policies

- **Test Cancellation:** A test may be cancelled at any time prior to reporting the result and you will be charged a \$40 cancellation fee. **The request to cancel must be in writing, signed, and faxed to us at 316-682-2062.**
- **Repeat Testing:** In most cases, unusual test results are automatically repeated by the laboratory and noted as such on the final report. If you question a result, please call the laboratory and we will further evaluate the result and repeat the test if necessary, at no charge, provided that we have sufficient quantity of specimen. For the most part, specimens are retained for at least one month.
- **Unacceptable Specimens:** If we determine that a specimen is unacceptable, specimen will be rejected. Please review "Causes for Rejection" accompanying each assay.
- **Turn Around Time (TAT):** Tests are performed within 10 business days. Vitamin C assays are performed daily. Some tests such as G6PD have a 2 day TAT.
- **Repeat testing** due to inconclusive results may also affect the TAT. Testing schedule may vary. If you have unusual circumstances or needs, please call us and we will make every effort to accommodate your concerns.
- All test requirements and availability are subject to change without notice.

Client Billing

- Fees are subject to change without prior notification. However, we will attempt to notify you if the changes occur.
- Personal checks, business checks, or credit cards are acceptable payment options.
- BCL does not file claims with private insurance carriers or Medicaid.

Client Billing Options

Option 1 -- Payment Included with Specimen Submittal: Payment from the patient or medical facility accompanies the specimen shipment. The patient's full name, address, date of birth, gender, and telephone number are required for processing the payment. Doctor's orders, if applicable, must be included with the payment and a properly completed requisition. All test results will be sent to the ordering physician. Therefore, the physician's full name & credentials (MD, ND, OD, etc...), address, telephone number (and fax number, if faxed reports are also desired) must be submitted with all specimens. Bio-Center Laboratory will send a receipt to the payer.

Option 2 -- Physician/Clinic/Reference Lab Billing: All new accounts must send a check or valid credit card information with shipment of the first specimen. For future shipments, BCL will invoice the referring facility each month, as needed, for each assay ordered. Payment is due within 30 days of invoice. The referring facility or physician's full name & credentials (MD, ND, OD, etc...), the physician/facility's address and telephone number (include fax number, if faxed reports are also desired) must be submitted with all specimens. Bio-Center Laboratory will send a receipt to the referring facility/physician.

Note: If neither box is checked, the ordering physician will be billed and will be responsible for payment.

Drawing and Processing Specimens

- General fasting specimens require a 12–14 hour fast. Drinking water is allowed and encouraged during a general fast.
- Serum specimens require that whole blood in the amount of 2 ½ times the required amount of serum be drawn. For example, if 2 mL serum is required, then at least 5 mL whole blood needs to be drawn. Individual patient hematocrits may affect the amount to be drawn. Unless noted, all serum specimens should be separated from cells by centrifugation within 45 minutes of venipuncture.
- Specimens drawn in ACD, EDTA, or heparin tubes contain anticoagulant. To prevent the specimen from clotting, mix thoroughly immediately after being drawn by inverting the tube gently at least six times.
- All volumes listed are pipettable volumes (i.e., extra volume must be included to allow for pipetting of specimen).
- Minimum volume specimens allow the sample to be tested once with no option for repeat analysis.
- Preferred volumes allow specimens to be tested several times. Minimum volume should only be sent if there was difficulty obtaining specimen.
- Specimens that need to be protected from freezing should never be placed directly next to an ice pack, or cells will burst (hemolysis will result), and the specimen will be unusable. To protect these specimens from freezing, separate the specimen from the ice pack with 1/2 inch of padding (such as bubble wrap or paper towels). Shipping containers with unfrozen whole blood specimen should be tightly packed to prevent movement during shipping. Add newspaper or other padding as needed.
- When storage instructions state specimen is to be frozen, the specimen should be frozen and then shipped with the frozen ice pack included in our kits. Specimens shipped in this manner will arrive in an acceptable condition. No additional ice packs are needed. If dry ice is required for shipment of any specimen, instructions will state this requirement.
- Light-protected specimens should be placed in an amber plastic transport tube. If using a clear or opaque plastic transport tube, wrap foil around the tube.
- Centrifuge time is 10 minutes at approximately 3000 rpm.

Specimen	Serum
Draw tube	Serum Separator Tube (SST) or Red-top tube
Processing	Allow blood to clot 15–30 minutes prior to centrifuging. Centrifuge specimen. Transfer serum to plastic transport tube. Discard red cells.
Specimen	Plasma
Draw tube	Green-top (heparin) tube, Lavender-top (EDTA) tube
Processing	Centrifuge specimen. Transfer plasma to plastic transport tube. Discard cells, unless RBC's are to be used for other testing.
Specimen	Whole blood
Draw tube	Green-top (heparin) tube, Lavender-top (EDTA) tube, Yellow-top (ACD) tube
Processing	Specimens can be shipped in the tube they were drawn in.
Specimen	Urine for Indican, Pyrroles, UA, and Vitamin C
Collection container	Use a clean disposable container for collection.
Processing	Pour appropriate amount of urine into a clean plastic screw capped transport tube.
Note	Pyrrole transport tubes are amber and must contain ascorbic acid for stability. Wrap tube in foil for light protection if amber tube is not available.

Specimen Submittal and Shipping

- **REQUIRED:** All specimen tubes and slides must be labeled with the patient's name & name of test being requested. Completed requisition forms must accompany all specimens. Required information on the requisition consists of the following: patient's name; patient's date of birth and gender; and date & time of specimen collection. If the test is ordered by a physician, the physician's name, physician's address and phone number (& fax number, if applicable) are also required. Use an "X" to mark the square in front of the test being requested. Failure to meet these minimum requirements may be "Cause for Rejection" of specimen.

CAUSES FOR REJECTION: Specimens not labeled with date, name of patient & test name; requisition not completed properly; improper specimen drawn (example: plasma specimen sent when serum is specified); specimen maintained or received at improper temperature; inadequate or inappropriate volume. Additional causes for rejection may be listed under individual test information.

- BCL does not require a physician's order for laboratory testing. Patient-ordered test results will be sent to the patient. Results of testing ordered by a physician will be sent directly to the physician.
- All specimens must be transported within a sturdy plastic bag with absorbent material placed next to the specimen. The specimen bag and frozen ice pack, if required, should then be sealed in the bubble bag provided (bubble bag not required for specimens shipped in styrofoam boxes) and then placed in a sturdy outer container or box for transport.
- **Note: Specimen must be shipped Monday – Thursday by FedEx overnight delivery. The lab is closed on weekends and holidays. Avoid shipping specimens around these days.** Place the box containing the specimen inside the FedEx Clinical Pak provided. Write your name and address in the "From" section on the prepaid label. You may drop off the package at any FedEx or FedEx Kinko's location. For FedEx shipping questions, call 1-800-GOFEDEX. If you are located outside of the Continental United States, you must make your own shipping arrangements.

Amino Acid, Essential

CPT 82131 (x10)

Profile Includes Histidine; isoleucine; leucine; lysine; methionine; phenylalanine; threonine; tryptophan; valine; arginine

Patient Preparation Fasting

Special Instructions None

Specimen Volume 1.5 mL EDTA plasma

Minimum Volume 0.5 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Amino Acid, Fractionated

CPT 82131 (x25)

Profile Includes Aspartic acid; glutamic acid; hydroxyproline; serine; asparagine; glycine; glutamine; taurine; histidine; citrulline; threonine; alanine; arginine; proline; α-amino-N-butyric acid; tyrosine; valine; methionine; cystine; isoleucine; leucine; phenylalanine; tryptophan; ornithine; lysine

Patient Preparation Fasting

Special Instructions None

Specimen Volume 1.5 mL EDTA plasma

Minimum Volume 0.5 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Beta Carotene

CPT 82380

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Boron, Urine

CPT 82190

Synonyms Urine B

Patient Preparation None

Special Instructions None

Specimen Volume 20 mL urine

Minimum Volume 10 mL

Collection Container Urine collection cup

Transport Container Urine collection cup

Storage & Transport Instructions Freeze

Cholesterol, Total

CPT 82465

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Chromium, Serum

CPT 82495

Synonyms Serum Cr

Patient Preparation None

Special Instructions None

Specimen Volume 0.5 mL serum

Minimum Volume 0.1 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

Coenzyme Q10

CPT 82491

Synonyms CoQ10

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Complete Blood Count with Differential (CBC)

CPT 85027, 85007

Synonyms CBC with Differential

Profile Includes: Automated count (white blood cells; red blood cells; hemoglobin; hematocrit; MCV; MCH; MCHC; platelets);

Manual Differential

Patient Preparation None

Special Instructions Collection tube must be filled to full draw capacity. Specimen must be shipped same day as collection. Specimens accepted Monday – Thursday only.

Specimen Volume 6 mL EDTA whole blood

Minimum Volume 6 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Collection tube, stable 24 hours refrigerated

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Gross hemolysis, frozen specimen, clotted specimen

Copper, RBC

CPT 82525

Synonyms RBC Cu

Patient Preparation None

Special Instructions None

Specimen Volume 6 mL Heparin whole blood

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection container

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Copper, Serum

CPT 82525

Synonyms Serum Cu

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

C-Reactive Protein (CRP) – High Sensitivity

CPT 86141

Synonyms Cardiac-Reactive Protein

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

DHEA-S

CPT 82627

Synonyms Dehydroepiandrosterone Sulfate

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum, light protected

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Estradiol

CPT 82670

Synonyms E2, Estradiol-17 beta

Patient Preparation None

Special Instructions None

Specimen Volume 0.8 mL

Minimum Volume 0.3 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Cause for Rejection Plasma specimen

Fatty Acids, RBC

CPT 82725 (x11)

Synonyms EFA, RBC

Profile Includes Omega-6 fatty acid family (linoleic, gamma linolenic, dihomo gamma linolenic, arachidonic, total omega-6); Omega-3 fatty acid family (alpha linolenic, eicosapentaenoic, docosahexaenoic, total omega-3 omega-6 to omega-3 balance); Monounsaturated fatty acids (oleic, total monounsaturated); Saturated fatty acid family (palmitic, stearic, total saturated); Unsaturated to Saturated Ratio; Elaidic

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL EDTA, whole blood

Minimum Volume 0.4 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Gross hemolysis, frozen specimen

Ferritin

CPT 82728

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.3 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Refrigerate or freeze

Causes for Rejection Gross hemolysis

Folate (Folic Acid)

CPT 82746

Synonyms Folic Acid

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Glucose

CPT 82947

Patient Preparation Fasting recommended

Special Instructions Separate serum from cells within 45 minutes of draw

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Glucose 6-Phosphate Dehydrogenase (G6PD)

CPT 82955

Synonyms Glucose 6-Phosphate Dehydrogenase

Patient Preparation None

Special Instructions Monday through Thursday collections only. Specimen must be shipped same day as collection.

Specimen Volume 6 mL EDTA whole blood.

Collection tube must be filled to full draw capacity.

Minimum Volume 6 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Collection tube, stable 24 hours

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Gross hemolysis, clotted specimen, frozen specimen

Glutathione RBC

CPT 82979

Patient Preparation None

Special Instructions Monday through Thursday collections only. Specimen must be shipped same day as collection.

Specimen Volume 10 mL ACD, whole blood and 6 mL EDTA. Each collection tube must be filled to full draw capacity.

Minimum Volume 10 mL ACD, 6 mL EDTA whole blood

Collection Containers Yellow-top (ACD) tube and Lavender-top (EDTA) tube

Transport Container Collection containers

Storage & Transport Instructions Refrigerate. DO NOT FREEZE. Tube needs to be wrapped properly to prevent breakage during transportation. Specimen must be received by no later than noon the next day following collection.

Causes for Rejection Moderate or excessive hemolysis, clotted specimen, frozen specimen, insufficient volume

Glycemic Profile

CPT 82947, 83036

Profile Includes Glucose; Hemoglobin A1c; Estimated Average Glucose.

Patient Preparation Fasting

Special Instructions Separate serum from cells within 45 minutes of draw.

Specimen Volume 1 mL serum, 6 mL whole blood

Minimum Volume 0.5 mL Serum, 1 mL whole blood

Collection Container SST and Lavender-top (EDTA) tube

Transport Containers Plastic transport tube for serum. Collection container for whole blood

Storage & Transport Instructions Refrigerate whole blood, freeze serum

Causes for Rejection Gross hemolysis, clotted whole blood specimen

Hemoglobin (Hgb) A1c

CPT 83036

Synonyms HbA1c

Patient Preparation None

Special Instructions DO NOT FREEZE

Specimen Volume 6 mL EDTA whole blood

Minimum Volume 6 mL

Collection Container Lavender-top (EDTA) tube

Transport Container Collection container

Storage and Transport Instructions Store specimens at room temperature or refrigerate, DO NOT FREEZE.

Causes for Rejection Clotted specimen, frozen specimen

Homocysteine

CPT 82131

Patient Preparation None

Special Instructions Keep specimen cold and centrifuge within 60 minutes

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Refrigerate or freeze

Causes for Rejection Gross hemolysis

Indican, Urine

CPT 84999

Patient Preparation None

Special Instructions None

Specimen Volume 12 mL urine

Minimum Volume 5.0 mL

Collection Container Urine collection cup

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Less than 5.0 mL received

Insulin

CPT 83525

Patient Preparation Fasting

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.3 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Lipid Profile

CPT 80061

Profile Includes Cholesterol; triglycerides; high-density lipoprotein (HDL); very low-density lipoprotein (VLDL); low-density lipoprotein (LDL) & risk classification for coronary heart disease (CHD); cholesterol to HDL ratio & risk classification for CHD; LDL to HDL ratio & risk classification for CHD

Patient Preparation Fasting 12-14 hours

Special Instructions None

Specimen Volume 4 mL serum

Minimum Volume 1.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Lutein

CPT 82491

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Magnesium, RBC

CPT 83735

Synonyms RBC Mg

Patient Preparation None

Special Instructions None

Specimen Volume 6 mL Heparin whole blood

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Magnesium, Serum

CPT 83735

Synonyms Serum Mg

Patient Preparation None

Special Instructions None

Specimen Volume 1.5 mL serum

Minimum Volume 0.5 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

Manganese, RBC

CPT 83785

Synonyms RBC Mn

Patient Preparation None

Special Instructions None

Specimen Volume 3 mL Heparin whole blood

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Manganese, Serum

CPT 83785

Synonyms Serum Mn

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

Progesterone

CPT 84144

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Parathyroid Hormone (PTH), Intact

CPT 83970

Synonyms PTH

Patient Preparation None

Special Instructions None

Specimen Volume 1.5 mL serum

Minimum Volume 0.7 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Cause for Rejection Gross hemolysis

PSA, Total

CPT 84153

Synonyms Prostate-Specific Antigen

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis



Pyrroles, Urine

CPT 84999

Synonyms Mauve Factor; Kryptopyrroles

Patient Preparation (1) If first time testing for pyrroles, discontinue taking any B6 or Zinc one week prior to collecting specimen. (2) If under treatment for pyrrroluria, continue taking vitamin B6 and Zinc.

Special Instructions None

Specimen Volume Approximately 8 mL urine added to 500mg of ascorbic acid. Stable at least 1 month if kept frozen.

Minimum Volume 2 mL

Collection Container Urine collection cup

Transport Container Amber plastic transport tube or tube protected from light

Storage & Transport Instructions Freeze

Causes for Rejection Ascorbic acid not used to maintain specimen stability

Pyrroles, Urine (3 collections)

CPT 84999 x3

See Pyrroles, Urine

Special Instructions 3 collections

A more comprehensive evaluation of pyrrole excretion may be done by collecting 3 specimens:

Specimen #1: Collected in a calm mental state

Specimen #2: Collected in an anxious mental state

Specimen #3: Collected in an extreme anxious mental state

Note: Label specimens carefully with each condition, time and date of each collection.

RBC Elements Profile #1

CPT 83735, 84630, 82525

Profile Includes: Magnesium; zinc; copper

Patient Preparation None

Special Instructions None

Specimen Volume 6 mL Heparin whole blood

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

RBC Elements Profile #2

CPT 83735, 84630, 82525, 83785, 84255

Profile Includes: Magnesium; zinc; copper; manganese; selenium

Patient Preparation None

Special Instructions None

Specimen Volume 6 mL Heparin whole blood

Minimum Volume 2 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Selenium, RBC

CPT 84255

Synonyms RBC Se

Patient Preparation None

Special Instructions None

Specimen Volume 1.5 mL Heparin whole blood

Minimum Volume 0.5 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Selenium, Serum

CPT 84255

Synonyms Serum Se

Patient Preparation None

Special Instructions None

Specimen Volume 1.5 mL serum

Minimum Volume 0.5 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Strontium, Urine

CPT 82190

Synonyms Urine Sr

Patient Preparation None

Special Instructions None

Specimen Volume 20 mL urine

Minimum Volume 10 mL

Collection Container Urine collection cup

Transport Container Urine collection cup

Storage & Transport Instructions Freeze

T3, Free (Unbound)

CPT 84481

Synonyms Free Tri-iodothyronine; f-T3

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

T4, Free (Direct)

CPT 84439

Synonyms Free T4, Direct, Serum; Unbound T4

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Plasma Specimen, gross lipemia

Testosterone

CPT 84403-90

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.3 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Refrigerate or Freeze

Causes for Rejection Gross hemolysis

Thyroid Antibodies

CPT 86800; 86376

Panel Includes Thyroid Antithyroglobulin Antibody, Thyroid Peroxidase (TPO) Antibodies

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis, gross lipemia

Thyroid Panel

CPT 84481; 84439; 84443

Panel Includes Free T3, Free T4, TSH

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis, gross lipemia

TSH

CPT 84443

Synonyms Thyroid-Stimulating Hormone

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Urinalysis + Urine Vitamin C

CPT (81002, if without urine sediment microscopy (81000, if with urine sediment microscopy); 81009

Synonyms UA + C

Profile Includes Color, appearance, & specific gravity are recorded. Dipstick testing includes: leukocyte esterase; nitrite; pH; protein; glucose; ketones; urobilinogen; bilirubin; blood (intact RBC); hemoglobin (lysed RBC); urine Vitamin C. Abnormal clarity, blood, nitrite, leukocyte and protein on dipstick will be followed up with a microscopic analysis of the urine sediment.

Patient Preparation None

Special Instructions First morning urine is preferred, but not required. Wash hands prior to collection. For a midstream-catch specimen, patient should urinate a small amount of urine into the toilet, then collect urine in the collection container without stopping the urine stream. Female patients: if specimen may be contaminated with vaginal discharge or menstrual blood, the vaginal area should be thoroughly cleansed by wiping from front to back with moistened towelettes prior to collecting a urine specimen. Note on requisition if patient is currently menstruating.

Specimen Volume 20 mL urine, midstream-catch; light protected

Minimum Volume 15 mL

Continued...



Continued...

Collection Container Urine collection cup

Transport Container Plastic transport tube; light protected

Storage & Transport Instructions Refrigerate within 10 minutes of collection. Keep refrigerated. DO NOT FREEZE.

Causes for Rejection Contaminated specimen, frozen specimen, unrefrigerated specimen, insufficient volume, specimen not protected from light. Specimen must be received by noon on Monday - Friday following the day of collection.

Vitamin A

CPT 84590

Synonyms Retinol

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Vitamin A, C, E Mini Profile

CPT 84590; 82180; 84446

Synonyms Antioxidant Mini Profile

Patient Preparation None

Special Instructions See instructions for vitamins A, E & Plasma C. Vitamins A & E may share the same specimen tube.

Vitamin A, C, E, B12, Folate Profile

CPT 84590; 82180; 84446; 82607; 82746

Patient Preparation None

Special Instructions See instructions for vitamins A, E, B12, Folate & Plasma C. Vitamins A, E, B12 & Folate may share the same specimen tube.

Vitamin A, E, Beta Carotene, Lutein, Lycopene Profile

CPT 84590; 84446; 82380; 82491 (x2)

Synonyms Lipid Soluble Antioxidant Profile

Patient Preparation None

Special Instructions None

Specimen Volume 3 mL serum; light protected

Minimum Volume 1 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Vitamin B1

CPT 84425

Synonyms Thiamine

Patient Preparation None

Special Instructions None

Specimen Volume 4 mL Heparin whole blood; light protected

Minimum Volume 2.0 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Vitamin B12

CPT 82607

Synonyms Cobalamin

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

Vitamin B12, Folate Profile

CPT 82607; 82746

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.4 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Hemolysis

Vitamin B2

CPT 84252

Synonyms Riboflavin

Patient Preparation None

Special Instructions None

Specimen Volume 4 mL Heparin whole blood, light protected

Minimum Volume 2.0 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen



Vitamin B6

CPT 84207

Synonyms Pyridoxine; Erythrocyte AST/EGOT

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL Heparin whole blood; light protected

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Vitamin C, Plasma

CPT 82180

Synonyms Plasma Ascorbic Acid

Patient Preparation None

Special Instructions Separate plasma from cells and process specimen immediately after collection. Ratio of plasma to 3% metaphosphoric acid (MPA) must be maintained, so care must be taken to add exact amount of plasma to the provided 4.5 mL aliquot of MPA. Plasma-MPA specimen is stable at least 3 months.

Specimen Volume 3 mL EDTA or Heparin plasma added to 4.5 mL cold MPA. Mix vigorously.

Minimum Volume 1 mL plasma added to 1.5 mL (adjusted volume) cold MPA. If minimum volumes of plasma & MPA are used, it must be noted on the requisition as (1 mL plasma + 1.5 mL MPA used).

Collection Container Green-top (heparin) tube or Lavender-top (EDTA) tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis, insufficient specimen, specimen not frozen, incorrect ratio of plasma to MPA

Vitamin C, Plasma - Post IVC Specimen

CPT 82180

Synonyms Plasma Ascorbic Acid

Patient Preparation None

Special Instructions Note on requisition grams of IVC given. Draw specimen from site on opposite arm used for IVC immediately after completed infusion or within 15 minutes of completion. Separate plasma from cells and process specimen immediately after collection. Ratio of plasma to 3% metaphosphoric acid (MPA) must be maintained, so care must be taken to add exact amount of plasma to the provided 4.5 mL aliquot of MPA. Plasma-MPA specimen is stable at least 3 months if kept frozen.

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Specimen Volume 3 mL EDTA or Heparin plasma added to 4.5 mL cold MPA. Mix vigorously.

Minimum Volume 1 mL plasma added to 1.5 mL (adjusted volume) cold MPA. If minimum volumes of plasma & MPA are used, it must be noted on the requisition as (1 mL plasma + 1.5 mL MPA used).

Collection Container Green-top (heparin) tube or Lavender-top (EDTA) tube

Transport Container Plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis, insufficient specimen, specimen not frozen, incorrect ratio of plasma to MPA

Note: Diabetic patients who monitor blood glucose with a finger stick strip and meter: high level post IVC (ascorbic acid) will cause a "FALSE POSITIVE" on the finger stick test. Wait 8 hours or more to check the patient's glucose with the finger stick and meter. If a test is needed during this time, have a serum glucose performed by a certified clinical laboratory.

Vitamin C Screen, Urine

CPT 81099

Synonyms Urine C

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL urine; light protected

Minimum Volume 0.5 mL

Collection Container Urine collection cup

Transport Container Plastic transport tube; light protected

Storage & Transport Instructions Refrigerate or freeze

Causes for Rejection Specimen not protected from light

Vitamin D, 25-Hydroxy

CPT 82306

Synonyms 25-Hydroxycalciferol; 25-OH-D

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.5 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis



Vitamin E

CPT 84446

Synonyms Alpha Tocopherol

Patient Preparation None

Special Instructions None

Specimen Volume 1 mL serum; light protected

Minimum Volume 0.2 mL

Collection Container SST or Red-top tube

Transport Container Amber plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Gross hemolysis

Yeast Species (Oral)

CPT 87201

Patient Preparation None

Special Instructions Swish 10 mL sterile water in mouth for 1 minute then spit back into collection container

Specimen Volume 10 mL mouth wash

Minimum Volume 10 mL

Collection Container Sterile collection cup

Transport Container Sterile collection cup

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Zinc, RBC

CPT 84630

Patient Preparation None

Special Instructions None

Specimen Volume 6 mL Heparin whole blood

Minimum Volume 1 mL

Collection Container Green-top (heparin) tube

Transport Container Collection tube

Storage & Transport Instructions Refrigerate. DO NOT FREEZE.

Causes for Rejection Frozen specimen

Zinc, Serum

CPT 84630

Synonyms Serum Zn

Patient Preparation None

Special Instructions None

Specimen Volume 2 mL serum

Minimum Volume 1 mL

Collection Container Royal blue-top tube (non-additive)

Transport Container Metal-free plastic transport tube

Storage & Transport Instructions Freeze

Causes for Rejection Moderate or excessive hemolysis

Call **316-684-7784** or
800-494-7785
to order test kits



Bio-Center
Laboratory

biocenterlab.org
316.684.7784 | 800.494.7785