ACETAMINOPHEN

Therapeutic: 10 - 30 mcg/mL
Toxic (12 hours after dose): > 50 mcg/mL

Interpretive Data:

ACETONE

Negative

Interpretive Data:

ACTIVATED PARTIAL THROMBOPLASTIN TIME (APTT)

=/< 30 days (full term infant): 34 - 51.2 sec
>30 days - Adult: 23.3 - 35.7 sec

Interpretive Data:

Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call laboratory (792-0707) to obtain reference range values for premature healthy infants.

The recommended aPTT therapeutic range for the treatment of Deep Vein Thrombosis (DVT) or Pulmonary Embolus (PE) using Unfractionated Heparin is 61 - 105 seconds which is equivalent to 0.3 - 0.7 Anti-Xa units/ml.

The Activated Partial Thromboplastin time (aPTT) is to be used for monitoring Direct Thrombin Inhibitor Therapy. The therapeutic range for these anticoagulants is 1.5 - 2 times the patient's base line aPTT.

Brill Edwards correlation of anti-Xa level to aPTT is as follows:

Anti-Xa (U/mL) = aPTT (seconds)
0.1 U/mL = 43.0 seconds
0.2 U/mL = 52.3 seconds
0.3 U/mL = 61.0 seconds
0.4 U/mL = 73.1 seconds
0.5 U/mL = 83.6 seconds
0.6 U/mL = 94.0 seconds
0.7 U/mL = 105.0 seconds
0.8 U/mL = 114.9 seconds
0.9 U/mL = 125.3 seconds
1.0 U/mL = 135.7 seconds

ACUTE LEUKEMIA PANEL

Pathologist interpretation is provided with the report

Interpretive Data:
ADRENOCORTICOTROPIC HORMONE

Interpretive Data:

Effective 8/1/2006, Adrenocorticotropic Hormone (ACTH) is measured by a solid phase two-site chemiluminescent immunometric assay (Immulite 2000, Diagnostics Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods.

Reference Interval; healthy adults: less than 46 pg/mL

Pediatric reference ranges have not established.

ALANINE AMINOTRANSFERASE (ALT)

Male:  10 - 45 IU/L
Female: 7 - 35 IU/L

Interpretive Data:

ALBUMIN, SERUM/PLASMA

3.5 - 4.8 gm/dL

Interpretive Data:

ALCOHOL

Negative (<5 mg/dL)

Interpretive Data:

ALCOHOL, URINE

Negative for Ethanol

Interpretive Data:

Effective 1/25/06, Ethanol in urine is measured by a spectrophotometric assay. (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

ALCOHOLS, VOLATILES

Negative for measured volatiles

Interpretive Data:

The results by this method are intended to assist the physician for clinical evaluation of the patient. Testing is not performed for legal purposes.
### ALKALINE PHOSPHATASE

<table>
<thead>
<tr>
<th>Age</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 yr</td>
<td>50 - 380 IU/L</td>
</tr>
<tr>
<td>1-5 yrs</td>
<td>85 - 320 IU/L</td>
</tr>
<tr>
<td>5-10 yrs</td>
<td>110 - 350 IU/L</td>
</tr>
<tr>
<td>10-16 yrs</td>
<td>85 - 380 IU/L</td>
</tr>
<tr>
<td>16-18 yrs</td>
<td>65 - 225 IU/L</td>
</tr>
<tr>
<td>&gt; 18 yrs</td>
<td>25 - 100 IU/L</td>
</tr>
</tbody>
</table>

### ALLERGY TESTING - CHILDHOOD DISEASE PROFILE

**BY IMMUNOCAP (SPECIFIC IGE)**

<table>
<thead>
<tr>
<th>kU/L</th>
<th>Class</th>
<th>Level of Allergen-Specific IgE Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.35</td>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>0.35 - 0.70</td>
<td>I</td>
<td>Low</td>
</tr>
<tr>
<td>0.70-3.50</td>
<td>II</td>
<td>Medium</td>
</tr>
<tr>
<td>3.50-17.5</td>
<td>III</td>
<td>High</td>
</tr>
<tr>
<td>17.5-50.0</td>
<td>IV</td>
<td>Very High</td>
</tr>
<tr>
<td>50.0-100</td>
<td>V</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt;100</td>
<td>VI</td>
<td>Very High</td>
</tr>
</tbody>
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### ALLERGY TESTING - FOOD

**ALLERGY PROFILE BY IMMUNOCAP (SPECIFIC IGE)**

<table>
<thead>
<tr>
<th>kU/L</th>
<th>Class</th>
<th>Level of Allergen-Specific IgE Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.35</td>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>0.35 - 0.70</td>
<td>I</td>
<td>Low</td>
</tr>
<tr>
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<td>II</td>
<td>Medium</td>
</tr>
<tr>
<td>3.50-17.5</td>
<td>III</td>
<td>High</td>
</tr>
<tr>
<td>17.5-50.0</td>
<td>IV</td>
<td>Very High</td>
</tr>
<tr>
<td>50.0-100</td>
<td>V</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt;100</td>
<td>VI</td>
<td>Very High</td>
</tr>
</tbody>
</table>
### ALLERGY TESTING - INDIVIDUAL ALLERGENS BY IMMUNOCAP (SPECIFIC IGE)

<table>
<thead>
<tr>
<th>kU/L</th>
<th>Class</th>
<th>Level of Allergen-Specific IgE Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.35</td>
<td>0</td>
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</tr>
<tr>
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<tr>
<td>3.50-17.5</td>
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</tr>
<tr>
<td>17.5-50.0</td>
<td>IV</td>
<td>Very High</td>
</tr>
<tr>
<td>50.0-100</td>
<td>V</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt;100</td>
<td>VI</td>
<td>Very High</td>
</tr>
</tbody>
</table>

### ALLERGY TESTING - SEAFOOD PROFILE BY IMMUNOCAP (SPECIFIC IGE)

<table>
<thead>
<tr>
<th>kU/L</th>
<th>Class</th>
<th>Level of Allergen-Specific IgE Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.35</td>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>0.35 - 0.70</td>
<td>I</td>
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</tr>
<tr>
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<td>High</td>
</tr>
<tr>
<td>17.5-50.0</td>
<td>IV</td>
<td>Very High</td>
</tr>
<tr>
<td>50.0-100</td>
<td>V</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt;100</td>
<td>VI</td>
<td>Very High</td>
</tr>
</tbody>
</table>

### ALLERGY TESTING - UPPER RESPIRATORY DISEASE PROFILE BY IMMUNOCAP (SPECIFIC IGE)

<table>
<thead>
<tr>
<th>kU/L</th>
<th>Class</th>
<th>Level of Allergen-Specific IgE Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.35</td>
<td>0</td>
<td>Absent</td>
</tr>
<tr>
<td>0.35 - 0.70</td>
<td>I</td>
<td>Low</td>
</tr>
<tr>
<td>0.70-3.50</td>
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<td>3.50-17.5</td>
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<tr>
<td>17.5-50.0</td>
<td>IV</td>
<td>Very High</td>
</tr>
<tr>
<td>50.0-100</td>
<td>V</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt;100</td>
<td>VI</td>
<td>Very High</td>
</tr>
</tbody>
</table>

### ALLOGENEIC STEM CELL HARVEST PANEL

**Interpretive Data:**
Reference Ranges for routine tests performed by MUSC Laboratory Services

ALPHA-FETOPROTEIN, AMNIOTIC FLUID

< or = 2.0 multiple of the median (MoM)

Interpretive Data:

ALPHA-FETOPROTEIN, TUMOR MARKER, SERUM

<8.0 ng/mL

Interpretive Data:

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results obtained with other methods cannot be used interchangeably.

The following information is provided to assist in the interpretation of serum alpha-fetoprotein (AFP) results obtained by the Bayer Centaur immunoassay method.

The AFP immunoassay is not a screening test for cancer. Do not interpret serum AFP levels as absolute evidence of the presence or absence of malignant disease. AFP testing should be used in conjunction with other clinical and diagnostic information. Elevated AFP values may be found in patients with confirmed non-malignant conditions. Low AFP levels do not necessarily indicate absence of disease.

AFP in Benign and Malignant Conditions

AFP in 1,858 serum samples from patients in the following diagnostic categories:

<table>
<thead>
<tr>
<th>Category of Samples</th>
<th>Distribution of Serum AFP, ng/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Apparently healthy adults</td>
<td>793</td>
</tr>
<tr>
<td>Malignant Diseases</td>
<td>717</td>
</tr>
<tr>
<td>Testicular cancer, seminoma</td>
<td>41</td>
</tr>
<tr>
<td>Testicular cancer, non-seminoma</td>
<td>204</td>
</tr>
<tr>
<td>Liver cancer, primary</td>
<td>80</td>
</tr>
<tr>
<td>Liver cancer, secondary</td>
<td>93</td>
</tr>
</tbody>
</table>

**AMIKACIN**

**THERAPEUTIC RANGE:**
- **Trough:** 1 - 8 mcg/mL
  - Less severe infection: 1 - 4 mcg/mL
  - Severe infection: 4 - 8 mcg/mL
- **Peak:** 25 - 35 mcg/mL

**TOXIC LEVELS:**
- **Trough:** > 10 mcg/mL
- **Peak:** > 35 mcg/mL

**Interpretive Data:**
- Effective 1/25/2006, Amikacin is measured by a fluorescence polarization immunoassay (Abbott TDxFix System).
- Effective levels vary with the severity of the infection.

---

**AMMONIA**

7 - 35 mcmol/L

---

**AMYLASE, FLUID**

Interpretation by physician

**Interpretive Data:**
- Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

---

**AMYLASE, SERUM**

27 - 130 IU/L

---

**AMYLASE, URINE**

12 - 204 IU/vol/24 hrs.

No reference range established for random collection.

---

**ANTI-DOUBLE STRANDED DNA**

- **Negative:** <25 IU/mL
- **Borderline Positive:** 25 - 30 IU/mL
- **Low Positive:** 31 - 60 IU/mL
- **Positive:** 61 - 200 IU/mL
- **Strong Positive:** >200 IU/mL

**Interpretive Data:**
- Performed by Enzyme Linked Immunoassay.
ANTI-GLOMERULAR BASEMENT MEMBRANE ANTIBODY
Negative: < 5 EU/mL
Borderline: 5 - 15 EU/ml
Positive: >15 EU/mL

Interpretive Data:

ANTI-MYELOPEROXIDASE ANTIBODY
Negative

Interpretive Data:

ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY-IgG
Titers of 1:20 or greater are positive

Interpretive Data:

ANTI-NUCLEAR ANTIBODY
Negative

Interpretive Data: This test is performed by IFA on HEP-2 cell substrate.

ANTI-PHOSPHOLIPID ANTIBODY
APA-IgG: 0 - 11 GPL
APA-IgM: 0 - 9 MPL

Interpretive Data: This test was developed and its performance characteristics determined by the Special Hematology Laboratory at the Medical University of SC. It has not been cleared or approved by the U.S. Food and Drug Administration. FDA approval of analyte specific reagent use in this setting is not required.

ANTI-THROMBIN III
< 30 days (full term infant): 54 - 80 %
> 30 days - Adult: 82 - 119 %

Interpretive Data: Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call the Coagulation Lab to obtain reference values for premature healthy infants.

ASPARTATE AMINOTRANSFERASE (AST)
Male: 12 - 38 IU/L
Female: 8 - 34 IU/L

Interpretive Data:
AUTOLOGOUS STEM CELL HARVEST PANEL

Interpretive Data:

BASIC METABOLIC PANEL
See Individual Components

Interpretive Data:

BETA-2 TRANSFERRIN

Interpretive Data: The detection of beta-2-transferrin (B-2 TRF) by immunofixation electrophoresis suggests the presence of CSF. The lowest level of B-2 TRF detectable by our laboratory's immunofixation method is 0.15 mg/dL or approximately 5% of the normal total TRF level in CSF. A "none detected" or "indeterminate" result does not exclude B-2 TRF. These terms mean that if B-2 TRF is present in the specimen, it is < 0.15 mg/dL. Cautious interpretation of "none detected" or "indeterminate" is advised. B-2 TRF is not found in normal serum, tears, saliva, nasal, or aural fluids; it has been identified in intra-ocular and perilymph fluids.
All results reviewed by a Clinical Pathologist or a Clinical Chemistry Faculty member.

Disclaimer: This test has not been approved by the U.S. Food and Drug Administration. The performance characteristics of this test were validated by the Special Chemistry Laboratory of the Medical University of South Carolina Hospital Authority. The testing result is not intended to be used as the only information for clinical diagnosis or management decisions. The Special Chemistry Laboratory of the Medical University of South Carolina Hospital Authority is authorized under Clinical Laboratory Improvement Amendments (CLIA) to perform high-complexity testing.

BILIRUBIN, DIRECT

0.1 - 0.3 mg/dL

Interpretive Data:

BILIRUBIN, FLUID

Interpretation by physician

Interpretive Data: Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

BILIRUBIN, TOTAL

newborn - 1 day: < 6.0 mg/dL
1 - 2 days: < 8.0 mg/dL
2 - 5 days: <12.0 mg/dL
5 days - 1 mo: < 10.0 mg/dL
> 1 mo: 0.2 - 1.3 mg/dL

Interpretive Data:
BILIRUBIN, URINE

Interpretive Data: Negative

BLOOD, URINE

Interpretive Data: Negative for blood and microscopics

BODY FLUID - DIFFERENTIAL CELL COUNT

- Pleural Fluid -
  Color: light yellow to yellow;
  Clarity: clear to hazy;
  Nucleated Cells: <1000/cumm;
  Polys: <25%

- Peritoneal Fluid -
  Color: light yellow;
  Clarity: clear to hazy;
  Nucleated cells: <500/cumm;
  RBCs: <100,000/cumm;
  Polys: <25%

- Pericardial Fluid -
  Color: light yellow;
  Clarity: Clear to Hazy,
  Nucleated Cells: <1000/cumm

- Synovial Fluid -
  Color: colorless to light yellow;
  Clarity: clear;
  Nucleated Cells: <200/cumm;
  Polys: 0-25%;
  Lymphs: 0-78%;
  Macrophages: 0-71%

Interpretive Data:

BONE MARROW ASPIRATION & BIOPSY

Interpretation by Pathologist.
**B-TYPE NATRIURETIC PEPTIDE**

0 - 100 pg/mL

**Interpretive Data:**

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.

Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

---

**C3, FLUID**

Reference ranges have not been established. Results should be interpreted by the ordering physician.

**Interpretive Data:**

Effective 1/25/2006, C3 is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer). This assay is FDA approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/plasma reference ranges do not apply to other sample types. Interpret with caution.

---

**C3, SERUM**

0 - 1 mo: 63.0 - 140.0 mg/dL
1 - 2 mo: 64.0 - 163.0 mg/dL
2 - 6 mo: 74.0 - 186.0 mg/dL
6 mo - 1 yr: 79.0 - 179.0 mg/dL
1 - 19 yrs: 70.0 - 206.0 mg/dL
19 - 150 yrs: 88.0 - 201.0 mg/dL

**Interpretive Data:**

Effective 1/25/06, C3 is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

---

**C4, FLUID**

**Interpretive Data:**

Effective 1/25/06, C4 is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer. This assay is FDA-approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/Plasma reference ranges do not apply to other sample types. Interpret with caution.

---

**C4, SERUM**

0 - 3 mos: 14.0 - 41.0 mg/dL
3 mos. - 19 yrs: 11.0 - 61.0 mg/dL
Adult: 16.0 - 47.0 mg/dL

**Interpretive Data:**

Effective 1/25/06, C4 is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer.
### CA 125

**Interpretive Data:**
- The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.
- Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

<35 U/mL

### CA 27.29

**Interpretive Data:**
- The CA 27.29 assay is indicated for use as an aid in the management of breast cancer patients with metastatic disease by monitoring the progression or regression of the disease in response to treatment.
- The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.
- Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

<40.0 U/mL

### CAFFEINE

- Neonates:
  - Therapeutic: 5-20 mcg/mL
  - Toxic: >40 mcg/mL

**Interpretive Data:**
- Reference ranges are for Neonates

### CALCIUM, FLUID

Interpretation by physician

**Interpretive Data:**
- Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

### CALCIUM, SERUM

- 0 - 10 days: 7.6 - 10.4 mg/dL
- 10 days - 24 months: 9.0 - 11.0 mg/dL
- 24 months - 12 yrs: 8.8 - 10.8 mg/dL
- > 12 yrs: 8.4 - 10.2 mg/dL

**Interpretive Data:**

### CALCIUM, URINE

- 0.10 - 0.30 gm/vol/24hr.
- No reference range established for random collection.

**Interpretive Data:**
CARBAMAZEPINE
Therapeutic: 4 - 12 mcg/mL
Toxic: > 15 mcg/mL

Interpretive Data: Effective 1/25/2006, Carbamazepine is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer).

CARBON DIOXIDE, FLUID
Interpretation by physician

Interpretive Data: Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

CARBON DIOXIDE, SERUM
22 - 32 mmol/L

Interpretive Data:

CARBON DIOXIDE, URINE
Interpretation by physician

Interpretive Data:

CARCINOEMBRYONIC ANTIGEN
Non-Smokers: 0 - 4.9 ng/mL
Smokers: 0 - 9.9 ng/mL

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

CBC

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>0-1 Month</th>
<th>1-12 yr</th>
<th>12-15 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>4.0-10.8</td>
<td>4.0-10.8</td>
<td>4.0-10.8</td>
</tr>
<tr>
<td>RBC</td>
<td>4.7-6.1</td>
<td>4.2-6.1</td>
<td>4.6-6.0</td>
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<tr>
<td>HGB</td>
<td>14.0-18.0</td>
<td>12.0-16.0</td>
<td>16.0-20.0</td>
</tr>
<tr>
<td>HCT</td>
<td>42.0-52.0</td>
<td>37.0-47.0</td>
<td>44.0-62.0</td>
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<tr>
<td>MCV</td>
<td>80.0-94.0</td>
<td>91.0-99.0</td>
<td>96.0-106.0</td>
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<td>11.0-15.0</td>
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<tr>
<td>PLT</td>
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<td>140-440</td>
<td>140-440</td>
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</table>

Interpretive Data:
### CBC WITH DIFFERENTIAL

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>ADULT</th>
<th>PEDIATRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>WBC.</td>
<td>4.8-10.8</td>
<td>4.8-10.8</td>
</tr>
<tr>
<td>RBC.</td>
<td>4.7-6.1</td>
<td>4.2-5.4</td>
</tr>
<tr>
<td>HGB.</td>
<td>14.0-18.0</td>
<td>12.0-16.0</td>
</tr>
<tr>
<td>HCT.</td>
<td>42.0-52.0</td>
<td>37.0-47.0</td>
</tr>
<tr>
<td>MCV.</td>
<td>80.0-94.0</td>
<td>91.0-99.0</td>
</tr>
<tr>
<td>MCH.</td>
<td>27.0-31.0</td>
<td>27.0-31.0</td>
</tr>
<tr>
<td>MCHC.</td>
<td>32.0-36.0</td>
<td>32.0-36.0</td>
</tr>
<tr>
<td>RDW.</td>
<td>11.5-14.5</td>
<td>11.5-14.5</td>
</tr>
<tr>
<td>PLT.</td>
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<td>140-440</td>
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</tbody>
</table>

### AUTOMATED DIFFERENTIAL - ADULT

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>MALE</th>
<th>FEMALE</th>
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<td>NEUTROPHIL%</td>
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</tr>
<tr>
<td>LYMPHOCYTE%</td>
<td>20-45</td>
<td>20-45</td>
</tr>
<tr>
<td>MONOCYTE%</td>
<td>0-10</td>
<td>0-10</td>
</tr>
<tr>
<td>EOSINOPHIL%</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>BASOPHIL%</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>ABS. NEUT K/CUMM</td>
<td>2.4-8.1</td>
<td>2.2-7.6</td>
</tr>
<tr>
<td>ABS. LYMPH K/CUMM</td>
<td>1.0-4.9</td>
<td>1.0-4.9</td>
</tr>
<tr>
<td>ABS. MONO K/CUMM</td>
<td>0.0-1.1</td>
<td>0.0-1.1</td>
</tr>
<tr>
<td>ABS. EOS K/CUMM</td>
<td>0.0-0.5</td>
<td>0.0-0.5</td>
</tr>
<tr>
<td>ABS. BASO K/CUMM</td>
<td>0.0-0.2</td>
<td>0.0-0.2</td>
</tr>
</tbody>
</table>

### PEDIATRICS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>0-1 MONTH</th>
<th>1 MONTH - 1 YEAR</th>
<th>1 YEAR - 15 YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEUTROPHIL%</td>
<td>30-50</td>
<td>32-52</td>
<td>40-60</td>
</tr>
<tr>
<td>LYMPHOCYTE%</td>
<td>35-55</td>
<td>40-60</td>
<td>2-50</td>
</tr>
<tr>
<td>MONOCYTE%</td>
<td>0-10</td>
<td>0-8</td>
<td>0-10</td>
</tr>
<tr>
<td>EOSINOPHIL%</td>
<td>0-5</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>BASOPHIL%</td>
<td>0-2</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>ABS. NEUT K/CUMM</td>
<td>1.8-9.0</td>
<td>1.9-7.3</td>
<td>2.0-6.6</td>
</tr>
<tr>
<td>ABS. LYMPH. K/CUMM</td>
<td>2.1-9.9</td>
<td>2.4-8.4</td>
<td>1.0-5.5</td>
</tr>
<tr>
<td>ABS. MONO K/CUMM</td>
<td>0.0-1.8</td>
<td>0.0-1.1</td>
<td>0.0-1.1</td>
</tr>
<tr>
<td>ABS. EOS. K/CUMM</td>
<td>0.0-0.9</td>
<td>0.0-0.7</td>
<td>0.0-0.6</td>
</tr>
<tr>
<td>ABS. BASO K/CUMM</td>
<td>0.0-0.4</td>
<td>0.0-0.3</td>
<td>0.0-0.2</td>
</tr>
</tbody>
</table>

### MANUAL DIFFERENTIAL - ADULT

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEUTROPHIL%</td>
<td>50-70</td>
<td>45-70</td>
</tr>
<tr>
<td>BAND%</td>
<td>0-6</td>
<td>0-6</td>
</tr>
<tr>
<td>MONOCYTES%</td>
<td>0-10</td>
<td>0-10</td>
</tr>
<tr>
<td>LYMPHOCYTE%</td>
<td>20-45</td>
<td>20-45</td>
</tr>
<tr>
<td>EOSINOPHIL%</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>BASOPHIL%</td>
<td>0-2</td>
<td>0-2</td>
</tr>
</tbody>
</table>

### MANUAL DIFFERENTIAL - PEDIATRIC

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>0-1 MT.</th>
<th>1MT.-1 YR.</th>
<th>1-15YRS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEUTROPHIL%</td>
<td>30-50</td>
<td>32-52</td>
<td>40-60</td>
</tr>
<tr>
<td>BAND%</td>
<td>0-6</td>
<td>0-6</td>
<td>0-6</td>
</tr>
<tr>
<td>MONOCYTE%</td>
<td>0-10</td>
<td>0-8</td>
<td>0-10</td>
</tr>
<tr>
<td>LYMPHOCYTE%</td>
<td>33-55</td>
<td>40-60</td>
<td>20-50</td>
</tr>
<tr>
<td>EOSINOPHIL%</td>
<td>0-5</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>BASOPHIL%</td>
<td>0-2</td>
<td>0-2</td>
<td>0-5</td>
</tr>
</tbody>
</table>

---

**Interpretive Data:**

Thursday, March 19, 2009
CD20 PANEL

Interpretive Data:

CD3 MONITORING

Interpretive Data:

CD34 QUANTITATION

Interpretive Data:

CEREBROSPINAL FLUID DIFFERENTIAL CELL COUNT

Interpretive Data:

CHLAMYDIA DETECTION BY DNA PROBE (AMPLIFIED)

No Chlamydia detected

Interpretive Data: A positive test may detect the presence of dead organisms up to 10 days after successful treatment.

CHLORIDE, FLUID

Interpretation by physician

Interpretive Data: Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

CHLORIDE, SERUM

98 - 107 mmol/L

Interpretive Data:

CHLORIDE, SPINAL FLUID

118 - 132 mmol/L

Interpretive Data:
### CHLORIDE, URINE

**Reference Range:** 110 - 250 mmol/vol/24 hrs

*No reference range established for random collection.*

### CHOLESTEROL CRYSTALS IN BILE FLUID

**Interpretive Data:** Negative

### CHOLESTEROL, FLUID

**Interpretive Data:** Interpretation by Physician.

**Disclaimer:** This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

### CHOLESTEROL, SERUM

**Interpretive Data:** Reference ranges based on ATP III Guidelines (National Cholesterol Education Program)

- **Desirable:** < 200 mg/dL
- **Borderline:** 200 - 239 mg/dL
- **High:** =$/> 240 mg/dL

### CHOLINESTERASE PHENOTYPE

- **Pseudocholinesterase:** 7 - 19 U/mL
- **Dibucaine:** 80 - 88 %

### CHOLINESTERASE, PSEUDO

**Interpretive Data:** 7 - 19 U/mL

### COLLOIDAL ONCOTIC PRESSURE

**Interpretive Data:** 22 - 26 Units
## Reference Ranges for routine tests performed by MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

### COMPREHENSIVE METABOLIC PANEL

See Individual Components

### CORTISOL

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Reference Range (mcg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>4.3 - 22.4</td>
</tr>
<tr>
<td>PM</td>
<td>3.1 - 16.7</td>
</tr>
</tbody>
</table>

*Interpretive Data:* The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

### C-PEPTIDE, SERUM

Reference range(s) and/or interpretation will be included with the test report.

### C-REACTIVE PROTEIN, HIGH SENSITIVITY

< 0.74 mg/dL

*Interpretive Data:* High sensitivity C-reactive protein (HS CRP) testing is optimized to measure very low CRP concentrations, 0.01-1.0 mg/dL, the range associated with low grade vascular inflammation and shown to be useful in assessing cardiovascular risk (Ridker, P.M. Ann. Intern. Med. 1999; 130;933-937). This testing method is also able to measure elevated CRP levels, typically seen in the acute phase response to infection, trauma, and inflammation. Effective 1/25/06, CRP is measured by a near-infrared particle immunoassay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

### C-REACTIVE PROTEIN, LOW SENSITIVITY

0 - 1 mg/dL

### CREATINE KINASE (CK)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Reference Range (IU/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>25 - 260</td>
</tr>
<tr>
<td>Female</td>
<td>20 - 190</td>
</tr>
</tbody>
</table>

*Interpretive Data:*
CREATINE KINASE MB ISOENZYME (MCKMB)

< 4.9 ng/mL: Negative for myocardial infarction.

/>= 5.0 ng/mL: Suggestive of cardiac and/or non-cardiac muscle injury. See Relative Index determination for differentiation.

NOTE: Relative Index (RI) is a unitless calculation with non-AMI ranges as follows:

Male: <2.0
Female: <2.4

These ranges do not rule out the possibility of cardiac damage.

Interpretive Data:

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

Notes from Bayer literature:

1. Apparently healthy individuals should have a median value of 0.78 ng/mL.
2. Of 167 hospitalized patients with non-cardiac disorders, the median value was 1.49 ng/mL.
3. Of 42 patients with confirmed acute myocardial infarction, the median value was 25.4 ng/mL with a range up to 144 ng/mL.


CREATININE CLEARANCE

Male: 90 - 130 mL/min
Female: 80 - 125 mL/min

Interpretive Data: Corrected to standard body surface area.

CREATININE, FLUID

Interpretation by physician

Interpretive Data: Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

CREATININE, SERUM

Male: 0.7 - 1.3 mg/dL
Female: 0.6 - 1.1 mg/dL

Interpretive Data:

CREATININE, URINE

0.8 - 2.8 gm/vol/24 hrs
No reference range established for random collection.

Interpretive Data:
CRYOFIBRINOGEN

No Cryofibrinogen is present

Interpretive Data:

CYCLIC CITRULLINATED PEPTIDE ANTIBODY, IGG

< or =  5 U/ml

Interpretive Data:

CYCLOSPORINE A

Test Methodology:  Liquid Chromatography/Tandem Mass Spectrometry

Levels measured in blood depend on many factors such as the time of blood collection, the dose administered, the co-administration of other substances, drug interactions, the organ transplanted, the preferences of the transplant program, and therapeutic management variables that may differ among patients.

Interpretive Data:

CYSTIC FIBROSIS MUTATION SCREEN

Interpretive report

Interpretive Data:

CYTOMEGALOVIRUS ANTIBODY - IgG

Interpretation of Results:

0.89 IV or less:   Negative- No clinically significant level of CMV IgG antibody detected.

0.90 - 1.09 IV:    Equivocal - Repeat testing in 10 - 14 days may be helpful.

1.10 IV or greater:     Positive - Significant level of CMV IgG antibody detected.

Interpretive Data:

CYTOMEGALOVIRUS ANTIBODY - IgM

Negative

Interpretive Data:

CYTOMEGALOVIRUS ANTIBODY SCREEN (TOTAL)

Negative

Interpretive Data:
CYTOMEGALOVIRUS DNA BY QUANTITATIVE PCR (VIRAL LOAD)  

The reportable range is 500-10,000,000 copies/ml of plasma.

INTERPRETIVE DATA:

D-DIMER <0.43 FEU (Fibrinogen Equivalent Unit)

Although some studies have established cut off levels for use of the D-Dimer Assay to exclude Deep Vein Thrombosis (DVT) and/or Pulmonary Embolism (PE), a cut off level has not been established or validated by this facility for the Diagnostica Stago Liatest D-Dimer Assay; therefore, a negative D-Dimer result of <0.43 ug/mL FEU should not be used exclusively to rule out the diagnosis of DVT or PE.

DELTA OD 450, AMNIOTIC FLUID  

Reference values are dependent on duration of pregnancy. Interpretation by physician

INTERPRETIVE DATA:

DIGOXIN Therapeutic: 0.8 - 2.0 ng/mL

The therapeutic range suggested for efficacy in patients with congestive heart failure is 0.5-1.0 ng/ml. The traditional therapeutic range of 0.8-2.0 ng/ml was originally developed to classify digoxin toxicity.


DRUG SCREEN, NON-LEGAL, URINE  

Negative (none detected)

INTERPRETIVE DATA:  

These results are for medical toxicology purposes only to assist clinical assessment. Urine Drug Screen testing is performed by immunoassay which is not a confirmatory method. False positive and false negative results may occur. Screen results are not confirmed automatically/ reflexively.

Screen cutoff concentrations:
- Amphetamines 1000 ng/mL
- Barbituates 200 ng/mL
- Benzodiazepines 200 ng/mL
- Cannabinoids (THC) 50 ng/mL
- Cocaine metabolites 300 ng/mL
- Opiates 300 ng/mL
- Phencyclidine (PCP) 25 ng/mL

Cutoffs are consistant with the USDHHS Substance Abuse and Mental Health Services Administration guidelines for clinical toxicology. Legal chain-of-custody service is not provided by Laboratory Services; refer to Policy#24, Division of Laboratory Services Policy Manual.

If results are inconsistent with the diagnosis, contact Client Services at 792-0707 to arrange for an alternate screening method or confirmatory testing.
**Reference Ranges for routine tests performed by MUSC Laboratory Services**

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

---

**EOSINOPHIL COUNT**

- **0 - 1 month:** 0-900/cumm
- **1 month - 1 year:** 0-700/cumm
- **1 year - 15 years:** 0-600/cumm
- **>15 years:** 0-500/cumm

**Interpretive Data:**

- No eosinophils present.
- Presence of Eosinophils may be seen in Allergic responses.

---

**EOSINOPHIL COUNT, NASAL SMEAR**

- Eosinophils: Rare
- **WBC's:** 0 - 5/HPF

**Interpretive Data:**

---

**EOSINOPHIL COUNT, URINE**

- Eosinophils: Rare
- **WBC's:** 0 - 5/HPF

**Interpretive Data:**

---

**EPSTEIN-BARR VIRUS DNA BY PCR, QUANTITATIVE ON BLOOD**

- The reportable range is 200-10,000,000 copies/ml of blood.

**Interpretive Data:**

---

**EPSTEIN-BARR VIRUS IgG ANTIBODY**

- **Index:**
  - **Negative:** <0.9
  - **Borderline:** 0.9 - 1.1
  - **Positive:** >1.1

**Interpretive Data:**

---

**ERYTHROPOIETIN**

- **3.7 - 31.5 mU/mL** in healthy individuals with a normal hematocrit.

**Interpretive Data:**

- Effective 8/1/2006, Erythropoietin (EPO) is measured by a solid phase, chemiluminescent immunometric assay (Immulite 2000, Diagnostics Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods.
- The reference interval is 3.7 - 31.5 mU/mL in healthy individuals with a normal hematocrit. Reference: Diagnostics Products Corporation Immulite 2000 EPO immunoassay literature (PIL2KEP-6, 2005-08-02).
**ESTRA DIOL**

<table>
<thead>
<tr>
<th>Male:</th>
<th>&lt;52 pg/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Mestruating Female:</td>
<td></td>
</tr>
<tr>
<td>Follicular Phase:</td>
<td>11-165 pg/mL</td>
</tr>
<tr>
<td>Midcycle:</td>
<td>146 - 526 pg/mL</td>
</tr>
<tr>
<td>Luteal Phase:</td>
<td>33-196 pg/mL</td>
</tr>
<tr>
<td>Post Menopausal:</td>
<td>&lt;37 pg/mL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**
The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.

Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

---

**ETHYLENE/PROPYLENE GLYCOL**

Negative
Toxic: >20 mg/dL
Lethal: >85 mg/dL

**Interpretive Data:**

---

**EXTRACTABLE NUCLEAR ANTIGEN ANTIBODIES (ENA)**

Reference Range for each antibody is as follows:
Negative: <20 EU/mL
Borderline: 20-25 EU/mL
Positive: >25 EU/mL

**Interpretive Data:**

---

**FACTOR ASSAY V (5), VII (7), VIII (8), IX (9), X (10)**

All Factors listed (Adult): 50 - 150 % activity
Factors V, VII, VIII =/30 days (full term infant): 50-150 % activity
Factor IX =/30 days (full term infant): 36 - 66 % activity
Factor X =/30 days (full term infant): 45 - 73 % activity

**Interpretive Data:**
Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call the Coagulation Lab to obtain reference values for premature healthy infants.

---

**FACTOR ASSAY XIII (13)**

Normal: The clot should not dissolve in less than 24 hrs

**Interpretive Data:**

---

**FACTOR V LEIDEN - DNA GENOTYPING**

Interpretive report

**Interpretive Data:**

---
FAT STAIN, FLUID

**Interpretive Data:**

Negative

FAT, URINE

**Interpretive Data:**

Negative

FERRITIN

Male: 22.0 - 322.0 ng/mL
Female: 10.0 - 290.0 ng/mL

**Interpretive Data:**

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.

Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

FETAL FIBRONECTIN

**Interpretive Data:**

Negative

FETAL HEMOGLOBIN STAIN

Normal Adult: <=0.01 % Fetal Hgb Containing cells
Amniotic Fluid: 0 %

**Interpretive Data:**

FETAL LUNG MATURITY

55 mg/g or greater strongly suggests fetal lung maturity.

**Interpretive Data:**

The following information for fetal lung maturity (FLM) testing by the Abbott FLM test measures total lung surfactants in amniotic fluid. It is performed automatically on a specialized instrument reading a fluorescence dye-binding reaction. Result: Quantitative, reported as milligrams (mg) of surfactant/gram (g) of albumin.

ADVANTAGE: Rapid, highly reproducible. Disadvantage: Meconium and heavy blood contamination will interfere.

INTERPRETATION: A result equal to or greater than 55 mg/g is 95% predictive of maturity. A result equal to or less than 39 mg/g is 47 - 61% predictive of immaturity. A result between 40 - 54 mg/g is indeterminate, predictive value is approximately 50%.

### Reference Ranges for routine tests performed by MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

#### FIBRINOGEN

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (mg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>=/&gt; 30 days (full term infant)</td>
<td>225 - 341</td>
</tr>
<tr>
<td>&gt; 30 days - Adult</td>
<td>231 - 486</td>
</tr>
</tbody>
</table>

**Interpretive Data:** Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call the Coagulation Lab to obtain reference values for premature healthy infants.

#### FOLIC ACID (FOLATE)

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (ng/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 5.4</td>
<td>ng/mL</td>
</tr>
</tbody>
</table>

**Interpretive Data:** The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

#### FOLLICLE STIMULATING HORMONE (FSH)

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (mIU/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE (ages 13-70)</td>
<td>1.4 - 18.1</td>
</tr>
<tr>
<td>NORMAL MENSTRUATING FEMALE</td>
<td></td>
</tr>
<tr>
<td>Follicular Phase</td>
<td>2.5 - 10.2</td>
</tr>
<tr>
<td>Mid-Cycle Phase</td>
<td>3.4 - 33.4</td>
</tr>
<tr>
<td>Luteal Phase</td>
<td>1.5 - 9.1</td>
</tr>
<tr>
<td>POST MENOPAUSAL FEMALE</td>
<td>23-0 - 116.3</td>
</tr>
</tbody>
</table>

**Interpretive Data:** The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

#### FRACTIONAL SODIUM EXCRETION

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1</td>
<td>%</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

#### GAMMA-GLUTAMYL TRANSFERASE (GGT)

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (IU/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 65</td>
<td>IU/L</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

#### GASTRIC pH

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>Reference Range (pH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 - 3.5</td>
<td>pH</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

---

Thursday, March 19, 2009 Page 23 of 64
GASTROCCULT

Blood is not normally present.
Normal Ph = 1-4

Interpretive Data:

GENTAMICIN

Effective 4/27/2006 the Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Results obtained with other methods cannot be used interchangeably. Reference range adapted from Lexi-Comp's Drug Information Handbook 13th Edition.

Therapeutic levels may vary according to the severity of the infection and the age of the patient.

Therapeutic Ranges:
Therapeutic, Peak: 5.0 - 10.0 mcg/mL
Critical, Peak: >10.0 mcg/mL

Therapeutic, Trough: <2.0 mcg/mL
Critical, Trough: >2.0 mcg/mL

This assay is FDA-approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/plasma reference ranges do not apply to other sample types. Interpret with caution.

GLUCOSE SCREEN (GESTATIONAL)

Screening of gestational diabetes on the basis of 1 hour Oral Glucose Tolerance Tests (OGTT) with 50 gram glucose load.

If one hour glucose is >139 mg/dl, pursue three hour OGTT (100 gram glucose load)
GLUCOSE TOLERANCE (NON-PREGNANT ADULTS OR CHILDREN)

Interpretive Data:
1. Criteria for the diagnosis of diabetes:
   a. Fasting plasma glucose (FPG) >125 mg/dL. Fasting is defined as no calorie intake for at least 8 h OR
   b. Casual plasma glucose (PG) >199 mg/dL with symptoms of diabetes including polyuria, polydipsia, and unexplained weight loss OR
   c. A 2-h plasma glucose >199 mg/dL during an Oral Glucose Tolerance Test with a 75-gm glucose load

Each category must be confirmed on a subsequent day unless unequivocal symptoms of hyperglycemia are present.

2. Hyperglycemia not sufficient to meet the above diagnostic criteria for diabetes is characterized as either impaired fasting glucose (IFG) or impaired glucose tolerance (IGT)
   IFG = FPG 100 - 125 mg/dL
   IGT = 2-h PG 140-199 mg/dL

GLUCOSE TOLERANCE, DIAGNOSIS OF GESTATIONAL DIABETES

Interpretive Data: Criteria for the diagnosis of gestational diabetes on the basis of an Oral Glucose Tolerance Test (OGTT) with 100 gram glucose load.

Two or more of the plasma glucose values must be met or exceeded:
1. Fasting: 95 mg/dL
2. 1 hour: 180 mg/dL
3. 2 hour: 155 mg/dL
4. 3 hour: 140 mg/dL

GLUCOSE, FASTING

Newborn - 1 month 45 - 90 mg/dL
>1 month 70 - 100 mg/dL

Interpretive Data: Interpretation by physician

GLUCOSE, FLUID

Interpretive Data: Interpretation by physician

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!
<table>
<thead>
<tr>
<th>Test Description</th>
<th>Reference Range</th>
<th>Interpretive Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLUCOSE, SPINAL FLUID</td>
<td>40 - 70 mg/dL</td>
<td></td>
</tr>
<tr>
<td>GLUCOSE, URINE</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>GLUCOSE, URINE (QUANTITATIVE)</td>
<td>0 - 0.5 gm/vol/24hrs. No reference range established for random collection.</td>
<td></td>
</tr>
<tr>
<td>GLUCOSE-6-PHOSPHATE DEHYDROGENASE</td>
<td>4.6 - 13.5 U/gm Hgb</td>
<td></td>
</tr>
<tr>
<td>GONORRHEA DETECTION BY DNA PROBE (AMPLIFIED)</td>
<td>No gonorrhea detected</td>
<td>A positive test may detect the presence of dead organisms up to 10 days after successful treatment.</td>
</tr>
<tr>
<td>GROWTH HORMONE</td>
<td>Males: &lt;16yrs: &lt;18 ng/mL &gt; or = 16 yrs: up to 1 ng/mL Females &lt;16yrs: &lt;8.8 ng/mL &gt; or = 16 yrs: up to 10 ng/mL</td>
<td>Effective 8/1/2006, Growth Hormone (GH) is measured by a solid phase two-site chemiluminescent immunometric assay (Immulite 2000, Diagnostics Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods. The assay is standardized to the 2nd WHO International Std, 98/574: Somatotropin (22 kD). The reference interval is from Diagnostics Products Corporation Immulite 2000 Growth Hormone assay literature (PILZKH-14, 2005-05-09). A single random test for GH may not be meaningful for the identification of deficiency or excess. Secretion is pulsatile and variable. A level &lt;7 ng/mL in two or more samples in children suggests impaired GH secretion.</td>
</tr>
</tbody>
</table>
Reference Ranges for routine tests performed by
MUSC Laboratory Services Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

**HAPTOGLOBIN**

Pediatric (0 - 19 yrs): 22-164 mg/dL
Adult: 36-195 mg/dL

**Interpretive Data:**

Effective 1/25/06, Haptoglobin is measured by an Immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

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**HDL CHOLESTEROL**

Low: Below 40 mg/dL
High: 60 mg/dL or greater

**Interpretive Data:**

Reference ranges based on ATP III Guidelines

---

**HEMATOCRIT**

ADULT: Male 42-52 %
Female 37-47 %
PEDIATRIC: 0-1 mos 44-62 %
1-12 mos 33-41 %
1-15 yrs 35-45 %

**Interpretive Data:**

HEMATOCRIT - BODY FLUID
Interpretation by physician

---

**HEMOGLOBIN**

ADULT: MALE 14-18 gm/dl
FEMALE 12-16 gm/dl
PEDIATRIC: 0-1 mos 16-20 gm/dl
1-12 mos 11.5-13.5 gm/dl
1-15 yrs 11-15 gm/dl.

**Interpretive Data:**

HEMOGLOBIN - BODY FLUID
Interpretation by physician

---
HEMOGLOBIN A1C

The following ranges may be used as interpretative guidelines (Ref: Diabetes Care* 2002:25: S33-S49):

- **> 8 %:** Action suggested
- **< 7 %:** ADA target for diabetic control
- **4 - 6%:** Normal glycemic control

**Interpretive Data:** Effective 1/25/2005, HbA1C is measured by Turbidimetric Immunoinhibition Assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

Hb SS, Hb SC, Hb CC and other hemoglobinopathies may produce aberrant HbA1C results that do not reflect the patient's true glycemic status. Hb F >10% and conditions that cause reduced erythrocyte survival can cause decreased HbA1C.

A HbA1C result that is inconsistent with the clinical impression may require referral testing by an alternate method. Contact Laboratory Client Services at 792-0707 for assistance.

### HEMOGLOBIN ELECTROPHORESIS

<table>
<thead>
<tr>
<th>Hgb</th>
<th>AGE</th>
<th>Reference Range(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0-6 mo</td>
<td>1.0 - 97.0</td>
</tr>
<tr>
<td></td>
<td>6 mo - 1 yr</td>
<td>93.0 - 99.4</td>
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<tr>
<td></td>
<td>&gt;1 yr</td>
<td>94.0 - 98.4</td>
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<tr>
<td>A2</td>
<td>0-6 mo</td>
<td>0.0 - 4.0</td>
</tr>
<tr>
<td></td>
<td>6 mo - 1 yr</td>
<td>0.5 - 4.0</td>
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<tr>
<td>F</td>
<td>0-6 mo</td>
<td>3.0 - 95.0</td>
</tr>
<tr>
<td></td>
<td>6 mo - 1 yr</td>
<td>0.1 - 3.0</td>
</tr>
<tr>
<td></td>
<td>&gt;1 yr</td>
<td>0.1 - 2.0</td>
</tr>
<tr>
<td>S</td>
<td>All ages</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>All ages</td>
<td>0</td>
</tr>
</tbody>
</table>

**Interpretive Data:** Method: Cation Exchange High Performance Liquid Chromatography

Abnormal hemoglobins S and C are confirmed by acid gel electrophoresis in-house. Other abnormal variants are confirmed by referral testing if requested by the ordering physician.

### HEMOGLOBIN, FREE - URINE

**Negative**

**Interpretive Data:**

### HEMOSIDERIN, URINE

**Negative**

**Interpretive Data:**

### HEPARIN ASSOCIATED ANTIPATELET ANTIBODY

**Negative**

**Interpretive Data:**
HEPARIN LEVEL
Therapeutic Range 0.3 - 0.7 IU/mL

HEPATIC FUNCTION PANEL

HEPATITIS A ANTIBODY - IgM Negative
Interpretive Data: A Positive test is indicative of acute Hepatitis A disease. DHEC is notified immediately of all positive patients.

HEPATITIS A ANTIBODY, TOTAL Negative
Interpretive Data: A positive result may be due to the presence of either IgG (previous exposure, successful vaccination) or IgM (Acute Hepatitis A disease)

HEPATITIS B CORE ANTIBODY - IgM Negative
Interpretive Data: A positive result indicates acute Hepatitis B disease.

HEPATITIS B CORE ANTIBODY, TOTAL Negative
Interpretive Data: A test result alone cannot be used to distinguish acute infection or previous infection from the carrier state.

HEPATITIS B SURFACE ANTIGEN SCREEN Negative
Interpretive Data: A negative test does not rule out exposure to the virus. Positive specimens with a less than 50 specimen to cutoff ratio are reported as “suspect” and are automatically reflexed to the confirmatory test. Positive specimens with a specimen to cutoff ratio greater than 50 are reported as positive, no confirmation testing is necessary. A confirmed positive test indicates exposure to the virus but does not distinguish acute infection from the carrier state.
HEPATITIS C VIRAL RNA BY PCR, QUANTITATIVE

None Detected: HCV RNA not detected
<50: HCV RNA detected, less than 50 IU/mL
>10,000,000: HCV RNA detected, greater than 10,000,000 IU/mL.

Interpretive Data: Assay methodology is real-time polymerase chain reaction (PCR) as performed using the Roche COBAS Taqman 48.

This test was developed and its appropriate performance characteristics determined by the Molecular Pathology laboratory of the Medical University of South Carolina. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. The Molecular Pathology Laboratory of the Medical University of South Carolina is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as qualified to perform high complexity clinical laboratory testing.

HEPATITIS C VIRUS ANTIBODY SCREEN

Negative

Interpretive Data: A negative test does not rule out an ongoing acute infection or previous exposure to the virus. Repeatedly positive specimens with a less than 8.0 specimen to cutoff ratio are reported "suspect" and automatically reflexed to the confirmatory HCV RIBA testing. Specimens with a specimen to cutoff ratio of greater than 8.0 are reported as positive, no confirmation testing is necessary. The presence of antibodies to HCV is evidence of exposure to the virus and may indicate a chronic infection; however, no diagnostic inferences as to the stage of the disease or time of exposure to the virus can be made from the test result.

HEPATITIS C VIRUS GENOTYPE

Interpretive Data: This HCV RNA genotype has been determined by the LiPA assay. This test was developed and its performance characteristics determined by the Molecular Pathology Lab at Medical University of South Carolina. It has not been cleared or approved by the U.S. Food and Drug Administration. FDA approval of analytic specific reagent use in this setting is not required.

HER-2/neu by FISH

Interpretation by Pathologist

HERPES SIMPLEX VIRUS ANTIBODY - IgG

INDEX:
Negative: <= 0.90
Borderline: 0.91 - 1.09
Positive: => 1.10

Interpretive Data: Performed by Enzyme Linked Immunoassay. Results from a single specimen may be used to determine immune status. Paired specimens are required to diagnose acute infection.
HERPES SIMPLEX VIRUS by
QUALITATIVE PCR, BLOOD

Interpretive Data: None Detected - No Herpes Simplex Virus was detected by PCR

HERPES SIMPLEX VIRUS TYPE
1 & 2 by PCR, QUALITATIVE ON
CSF

Interpretive Data: None Detected - No Herpes Simplex Virus was detected by PCR

HETEROPHILE ANTIBODY
SCREEN

Interpretive Data: Negative

HOMOCYSTEINE

Interpretive Data: 5.0 - 14.0 umol/L

HUMAN CHORIONIC
GONADOTROPIN (HCG; Total
beta-hCG)

Interpretive Data: Non-pregnant <5 mIU/mL
Indeterminate 5-10 mIU/mL
Pregnant >10 mIU/mL

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.
**HUMAN IMMUNODEFICIENCY VIRUS 1 & 2 ANTIBODY**

**Interpretive Data:** The absence of detectable antibody to HIV-1 and HIV-2 in the EIA screening test does not rule out exposure to these viruses. Specimens repeatedly positive by the EIA screening test are reported as "Suspect" and must be confirmed by Western Blot. A positive screening test alone must not be used to establish a diagnosis of HIV infection.

**HUMAN IMMUNODEFICIENCY VIRUS-1 RNA VIRAL LOAD BY PCR**

**Interpretive Data:**

- **NONE DET:** No HIV-1 RNA detected.
- **<40:** The amount of HIV-1 RNA is less than 40 copies/mL.
- **>10,000,000:** The amount of HIV-1 RNA is greater than 10,000,000 copies/mL.

Questions regarding clinically significant changes in viral load can be directed to Dr. Daynna Wolff at Pager ID 14359.

The assay methodology is polymerase chain reaction (PCR) as performed using the Abbott M2000 Realtime PCR Test.

The linear range of this assay is between 40 and 10,000,000 copies/mL.

**HUMAN PAPILLOMAVIRUS (HPV) DETECTION - HIGH RISK**

**Interpretive Data:** Reported as positive or negative for the following high risk subtypes: 16, 18, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68.

**HUMAN T LYMPHOTROPHIC VIRUS-I & II ANTIBODY**

**Interpretive Data:** A negative test does not rule out exposure to the virus. This test detects antibodies to both HTLV-I and HTLV-II. Specimens which are repeatedly positive by the EIA screening test are reported as "Suspect" and reflexed to confirmation by Western Blot. A confirmed positive result indicates current infection or previous exposure to the virus.

**IGF - I**

**Interpretive Data:** Reference range(s) and/or interpretation will be included with the test report.

**IGF BINDING PROTEIN - 3 (IGFBP-3)**

**Interpretive Data:** Reference range(s) and/or interpretation will be included with the test report.
### Immunodeficiency Panel A

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<th>Percent</th>
<th>Absolute #</th>
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<td>Neonatal</td>
<td>28-76%</td>
<td>600-5000/mm³</td>
</tr>
<tr>
<td></td>
<td>1 wk-2mo</td>
<td>60-85%</td>
<td>2300-7000/mm³</td>
</tr>
<tr>
<td></td>
<td>2 mo-5 mo</td>
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<td>Adult</td>
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<tr>
<td>CD4</td>
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<td>17-52%</td>
<td>400-3500/mm³</td>
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<td>1 wk-2mo</td>
<td>41-68%</td>
<td>1700-5300/mm³</td>
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<td></td>
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<td>1400-5100/mm³</td>
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<td>1000-4600/mm³</td>
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<td>25-48%</td>
<td>400-2100/mm³</td>
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<td>300-1400/mm³</td>
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<td>1 wk-2mo</td>
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<td>400-1700/mm³</td>
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<td>2 mo-5 mo</td>
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<td>500-1600/mm³</td>
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<td>2 yr - 5 yr</td>
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<td>10 yr - 16 yr</td>
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<td>200-900/mm³</td>
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<td>200-900/mm³</td>
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<td>CD4/CD8 Ratio</td>
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<td>1.0-2.6</td>
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<td>1 wk-2mo</td>
<td>1.3-6.3</td>
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<td>2 mo-5 mo</td>
<td>1.7-3.9</td>
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<td>10 yr - 16 yr</td>
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</table>

**Interpretive Data:**
**IMMUNODEFICIENCY PANEL B**

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<td>1 wk-2mo</td>
<td>4-26%</td>
<td>600-1900/mm³</td>
</tr>
<tr>
<td></td>
<td>2 mo-5 mo</td>
<td>14-39%</td>
<td>600-3000/mm³</td>
</tr>
<tr>
<td></td>
<td>5 mo-9 mo</td>
<td>13-35%</td>
<td>700-2500/mm³</td>
</tr>
<tr>
<td></td>
<td>9 mo-15 mo</td>
<td>15-39%</td>
<td>600-2700/mm³</td>
</tr>
<tr>
<td></td>
<td>15 mo - 24 mo</td>
<td>17-41%</td>
<td>600-3100/mm³</td>
</tr>
<tr>
<td></td>
<td>2 yr - 5 yr</td>
<td>14-44%</td>
<td>200-2100/mm³</td>
</tr>
<tr>
<td></td>
<td>5 yr - 10 yr</td>
<td>10-31%</td>
<td>200-1600/mm³</td>
</tr>
<tr>
<td></td>
<td>10 yr - 16 yr</td>
<td>8-24%</td>
<td>200-600/mm³</td>
</tr>
<tr>
<td></td>
<td>Adult</td>
<td>6-19%</td>
<td>100-500/mm³</td>
</tr>
<tr>
<td>CD56</td>
<td>Neonatal</td>
<td>6-58%</td>
<td>100-1900/mm³</td>
</tr>
<tr>
<td></td>
<td>1 wk-2mo</td>
<td>3-23%</td>
<td>200-1400/mm³</td>
</tr>
<tr>
<td></td>
<td>2 mo-5 mo</td>
<td>2-14%</td>
<td>100-1300/mm³</td>
</tr>
<tr>
<td></td>
<td>5 mo-9 mo</td>
<td>2-13%</td>
<td>100-1000/mm³</td>
</tr>
</tbody>
</table>
### Reference Ranges for routine tests performed by MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Hematocrit</th>
<th>Hemoglobin</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 mo-15 mo</td>
<td>3-17%</td>
<td>200-1200/mm³</td>
</tr>
<tr>
<td>15 mo - 24 mo</td>
<td>3-16%</td>
<td>100-1400/mm³</td>
</tr>
<tr>
<td>2 yr - 5 yr</td>
<td>4-23%</td>
<td>100-1000/mm³</td>
</tr>
<tr>
<td>5 yr - 10 yr</td>
<td>4-26%</td>
<td>90-900/mm³</td>
</tr>
<tr>
<td>10 yr - 16 yr</td>
<td>6-27%</td>
<td>70-1200/mm³</td>
</tr>
<tr>
<td>Adult</td>
<td>7-31%</td>
<td>90-600/mm³</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

**IMMUNOFIXATION ELECTROPHORESIS, SERUM**

Interpretation by Pathologist

The presence of monoclonal IgG, monoclonal D, or nonsecretory myelomas cannot be identified by this method. If clinically indicated, the ordering physician may request referral testing.

**IMMUNOFIXATION ELECTROPHORESIS, URINE**

Interpretation by Pathologist

The presence of monoclonal IgE, monoclonal D, or nonsecretory myelomas cannot be identified by this method. If clinically indicated, the ordering physician may request referral testing.

**IMMUNOGLOBULIN A**

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn - 1mo</td>
<td>1.4 - 3.6 mg/dL</td>
</tr>
<tr>
<td>1 mo - 2 mos:</td>
<td>1.3 - 53.0 mg/dL</td>
</tr>
<tr>
<td>2 mos - 3 mos:</td>
<td>2.8 - 47.0 mg/dL</td>
</tr>
<tr>
<td>3 mos - 4 mos:</td>
<td>4.6 - 46.0 mg/dL</td>
</tr>
<tr>
<td>4 mos - 5 mos:</td>
<td>4.4 - 72.3 mg/dL</td>
</tr>
<tr>
<td>5 mos - 6 mos:</td>
<td>8.0 - 83.1 mg/dL</td>
</tr>
<tr>
<td>6 mos - 7 mos:</td>
<td>8.0 - 67.3 mg/dL</td>
</tr>
<tr>
<td>7 mos - 10 mos:</td>
<td>11.0 - 89.1 mg/dL</td>
</tr>
<tr>
<td>10 mos - 1 yr:</td>
<td>15.8 - 83.2 mg/dL</td>
</tr>
<tr>
<td>1 yr - 2 yrs:</td>
<td>13.9 - 105.0 mg/dL</td>
</tr>
<tr>
<td>2 yrs - 3 yrs:</td>
<td>13.9 - 122.0 mg/dL</td>
</tr>
<tr>
<td>3 yrs - 4 yrs:</td>
<td>22.0 - 157.0 mg/dL</td>
</tr>
<tr>
<td>4 yrs - 6 yrs:</td>
<td>25.0 - 152.0 mg/dL</td>
</tr>
<tr>
<td>6 yrs - 9 yrs:</td>
<td>33.0 - 200.0 mg/dL</td>
</tr>
<tr>
<td>9 yrs - 11 yrs:</td>
<td>45.0 - 234.0 mg/dL</td>
</tr>
<tr>
<td>11 yrs - 15 yrs:</td>
<td>69.0 - 382.0 mg/dL</td>
</tr>
</tbody>
</table>

Effective 1/25/2006, IgA is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).
### Reference Ranges for routine tests performed by MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

#### IMMUNOGLOBULIN E

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 yr</td>
<td>&lt; 53.0 IU/mL</td>
</tr>
<tr>
<td>1 - 4 yrs</td>
<td>&lt; 352.0 IU/mL</td>
</tr>
<tr>
<td>5 - 10 yrs</td>
<td>&lt; 394.0 IU/mL</td>
</tr>
<tr>
<td>11 - 15 yrs</td>
<td>&lt; 171.0 IU/mL</td>
</tr>
<tr>
<td>&gt; 15 yrs</td>
<td>&lt; 379.0 IU/mL</td>
</tr>
</tbody>
</table>

**Interpretive Data:** The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

#### IMMUNOGLOBULIN G

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn - 1mo</td>
<td>611.0 - 1542.0 mg/dL</td>
</tr>
<tr>
<td>1 mo - 2 mos</td>
<td>241.0 - 670.0 mg/dL</td>
</tr>
<tr>
<td>2 mos - 3 mos</td>
<td>198.0 - 577.0 mg/dL</td>
</tr>
<tr>
<td>3 mos - 4 mos</td>
<td>169.0 - 558.0 mg/dL</td>
</tr>
<tr>
<td>4 mos - 5 mos</td>
<td>188.0 - 536.0 mg/dL</td>
</tr>
<tr>
<td>5 mos - 6 mos</td>
<td>165.0 - 781.0 mg/dL</td>
</tr>
<tr>
<td>6 mos - 7 mos</td>
<td>206.0 - 676.0 mg/dL</td>
</tr>
<tr>
<td>7 mos - 10 mos</td>
<td>208.0 - 868.0 mg/dL</td>
</tr>
<tr>
<td>10 mos - 1 yr</td>
<td>282.0 - 1026.0 mg/dL</td>
</tr>
<tr>
<td>1 yr - 2 yrs</td>
<td>331.0 - 1164.0 mg/dL</td>
</tr>
<tr>
<td>2 yrs - 3 yrs</td>
<td>407.0 - 1091.0 mg/dL</td>
</tr>
<tr>
<td>3 yrs - 4 yrs</td>
<td>423.0 - 1090.0 mg/dL</td>
</tr>
<tr>
<td>4 yrs - 5 yrs</td>
<td>444.0 - 1187.0 mg/dL</td>
</tr>
<tr>
<td>5 yrs - 6 yrs</td>
<td>468.0 - 1289.0 mg/dL</td>
</tr>
<tr>
<td>6 yrs - 7 yrs</td>
<td>504.0 - 1394.0 mg/dL</td>
</tr>
<tr>
<td>7 yrs - 9 yrs</td>
<td>584.0 - 1509.0 mg/dL</td>
</tr>
<tr>
<td>8 yrs - 10 yrs</td>
<td>723.0 - 1655.0 mg/dL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

Effective 1/25/2006, IgM is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).
INHIBITOR ASSAY  
No Inhibitor detected  
Interpretive Data: Assay reviewed by pathologist  

INSULIN  
2.6 - 11.0 uU/mL  
Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.  

IRON  
Male: 65 - 175 mcg/dL  
Female: 50 - 170 mcg/dL  
Interpretive Data:  

IRON/IRON BINDING CAPACITY  
Iron:  
Male: 65 - 175 mcg/dL  
Female: 50 - 170 mcg/dL  
UIBC: 130 - 375 mcg/dL  
TIBC: 245 - 425 mcg/dL  
% Saturation  
Male: 20 - 50 %  
Female: 15 - 50 %  
Transferrin: 202.0 - 336.0  
Interpretive Data: Effective 1/25/2006, Transferrin is measured by an immunoturbidimetric assay (Beckman Coulter Synchro DxC 800 Chemistry Analyzer). This assay is FDA-approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/plasma reference ranges do not apply to other sample types - interpret with caution.  

LACTATE DEHYDROGENASE, FLUID  
Interpretation by physician.  
Interpretive Data: Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!
LACTATE DEHYDROGENASE, SERUM

100 - 240 IU/L

Interpretive Data:

LACTATE DEHYDROGENASE, SPINAL FLUID

0-25 IU/L

Interpretive Data:

LACTIC ACID, FLUID (OTHER THAN SPINAL FLUID)

Interpretation by physician

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

LACTIC ACID, PLASMA

0.5 - 2.2 mmol/L

Interpretive Data:

LACTIC ACID, SPINAL FLUID (CSF)

5 - 20 mg/dL

Interpretive Data:

LACTOSE TOLERANCE

Interpretation by physician

LDL CHOLESTEROL, DIRECT MEASUREMENT

Optimal: <70 mg/dL for very high risk patients
<100 mg/dL for high risk patients
Near Optimal: 100-129 mg/dL
Borderline-Moderately High: 130 - 159 mg/dL
High: 160 - 189 mg/dL
Very High: 190 mg/dL or greater

Reference ranges based on ATP III Guidelines (National Cholesterol Education Program, 2004 Update)
**LEAD, BLOOD**

Adult: 0 - 25 mcg/dL  
Toxic: >130 mcg/dL  
Pediatric: The CDC relates the following blood lead levels and guidelines for clinical intervention in children:  
Class I: <10 mcg/dL  
Class II-A: 10-14 mcg/dL  
Class II-B: 15-19 mcg/dL  
Class III: 20-44 mcg/dL  
Class IV: 45-69 mcg/dL  
Class V: >69 mcg/dL  

**INTERPRETATION**  
Children in:  
Class I: are not considered to be lead poisoned.  
Class II-A: may need to be screened more frequently. A high number of children with levels in this range should trigger community-wide lead poisoning prevention.  
Class II-B: should receive nutritional and education interventions and more frequent screening. If the level persists in this range, environmental investigation and intervention should be done.  
Class III: should receive environmental education and remediation and a medical evaluation. May need pharmacological treatment of lead poisoning.  
Class IV: will need both medical and environmental interventions, including chelation therapy.  
Class V: ARE A MEDICAL EMERGENCY. Medical and environmental management must begin IMMEDIATELY.

**LEUKOCYTE ALKALINE PHOSPHATASE STAIN**

Normal Lap Score: 32 - 182  
Mean: 92

**LEUKOCYTE CYTOCHEMISTRY**

Interpretation by Pathologist

**LIDOCAINE**

Therapeutic: 1.5 - 5.0 mcg/mL  
Toxic: > 6.0 mcg/mL
LIPASE, FLUID

Interpretation by physician

Interpretive Data:
Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

LIPASE, SERUM

10 - 50 IU/L

Interpretive Data:

LIPID PROFILE

TOTAL CHOLESTEROL:
Optimal: < 200 mg/dL
Borderline: 200 - 239 mg/dL
High: 240 mg/dL or greater

HDL CHOLESTEROL:
Low: < 40 mg/dL
High: 60 mg/dL or greater

LDL CHOLESTEROL
Optimal: < 70 mg/dL for very high risk patients
< 100 mg/dL for high risk patients
Near Optimal: 100 - 129 mg/dL
Borderline - Moderately High: 130 - 159 mg/dL
High: 160 - 189 mg/dL
Very High: 190 mg/dL or greater

VLDL CHOLESTEROL
< 30 mg/dL

TRIGLYCERIDES
Normal: < 150 mg/dL
Borderline High: 150 - 199 mg/dL
High: 200 - 499 mg/dL
Very High: 500 mg/dL or greater

Interpretive Data:
Reference ranges based on ATP III Guidelines (National Cholesterol Education Program, 2004 Update)

LITHIUM

Therapeutic: 0.6 - 1.2 mmol/L
Toxic level: > 1.8 mmol/L

Interpretive Data:
LOW MOLECULAR WEIGHT HEPARIN (ANTI-Xa LEVEL)

RECOMMENDED: Therapeutic level of Low Molecular Weight Heparin = 0.4-1.0 anti-Factor Xa IU/mL

Interpretive Data:
- Reference range for Deep Vein Thrombosis (DVT) prophylaxis is 0.1 - 0.3 anti-Xa units/mL.
- DVT/Pulmonary Embolus (PE) therapy is 0.4 - 1.0 anti-Xa units/mL.

LUPUS ANTICOAGULANT SCREEN

Negative

Interpretive Data:

LUTEINIZING HORMONE

MALE (ages 20 - 70): 1.5 - 9.3 mIU/mL
NORMAL MENSTRUATING FEMALE -
Follicular Phase: 1.9 - 12.5 mIU/mL
Mid-Cycle Peak: 8.7 - 76.3 mIU/mL
Luteal Phase: 0.5 - 16.9 mIU/mL
Post-Menopausal: 15.9 - 54.0 mIU/mL

Interpretive Data:
- The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.
- Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

LYMPHOMA/CLL PANEL

Pathologist interpretation will be provided with the report.

Interpretive Data:

MAGNESIUM, FLUID

Interpretation by physician

Interpretive Data:
- Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

MAGNESIUM, SERUM

1.6 - 2.3 mg/dL

Interpretive Data:
## Reference Ranges for routine tests performed by MUSC Laboratory Services

**Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology**

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Range</th>
<th>Interpretive Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAGNESIUM, URINE</strong></td>
<td>0.073 - 0.122 gm/vol/24 hrs</td>
<td>No reference range established for random collection</td>
</tr>
<tr>
<td><strong>MATERNAL SERUM QUAD TEST SCREEN (2nd Trimester)</strong></td>
<td>Interpretation provided with a report by a Genetics Counselor.</td>
<td></td>
</tr>
<tr>
<td><strong>METHOTREXATE</strong></td>
<td>Interpretation by physician</td>
<td></td>
</tr>
<tr>
<td><strong>MICROALBUMIN</strong></td>
<td>Microalbumin: &lt;19 mg/L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Albumin/Creatinine Ratio (Random urine): &lt; 30 mg/g</td>
<td></td>
</tr>
<tr>
<td><strong>MIXING STUDY</strong></td>
<td>Corrected - Generally indicates correction of a prolonged PT/PTT suggesting factor deficiency.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uncorrected (No correct) - Generally indicates no correction of a prolonged PT/PTT suggesting an inhibitor is present.</td>
<td></td>
</tr>
<tr>
<td><strong>MULTIPLE MYELOMA FLOW CYTOMETRY PANEL</strong></td>
<td>Pathologist interpretation will be included with the test report.</td>
<td></td>
</tr>
</tbody>
</table>

**Effective 1/25/2006, Urine Microalbumin is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).**
## Reference Ranges for routine tests performed by MUSC Laboratory Services

**Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology**

<table>
<thead>
<tr>
<th>Test</th>
<th>Range</th>
<th>Interpretive Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MYCOPHENOLIC ACID</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mycophenolic acid with cyclosporine A:</td>
<td>1.3-3.5 mcg/ml (mg/L)</td>
<td></td>
</tr>
<tr>
<td>Mycophenolic acid with tacrolimus:</td>
<td>1.9-4.0 mcg/mL (mg/L)</td>
<td></td>
</tr>
<tr>
<td>Interpretive Data: Test Methodology: Liquid Chromatography/Tandem Mass Spectrometry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclaimer: This test method has not been approved by the U.S. Food and Drug Administration. The performance characteristics of this method were validated by the Special Chemistry Laboratory of the Medical University of South Carolina Hospital Authority. The testing result is not intended to be used as the only information for clinical diagnosis or management decisions. The Special Chemistry Laboratory of the Medical University of South Carolina Hospital Authority is authorized under Clinical Laboratory Improvement Amendments (CLIA) to perform high-complexity testing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MYOGLOBIN, URINE</strong></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Interpretive Data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEURAL TUBE DEFECT</strong></td>
<td></td>
<td>Interpretation provided with report by a Genetics Counselor.</td>
</tr>
<tr>
<td><strong>MATERNAL SCREEN (2nd Trimester)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpretive Data:</td>
<td>Maternal serum testing results are adjusted for gestational age, maternal age, race, weight, and insulin dependent diabetes when indicated.</td>
<td></td>
</tr>
<tr>
<td><strong>OSMOLALITY, FLUID</strong></td>
<td></td>
<td>Interpretation by physician</td>
</tr>
<tr>
<td>Interpretive Data:</td>
<td>Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!</td>
<td></td>
</tr>
<tr>
<td><strong>OSMOLALITY, SERUM</strong></td>
<td>280 - 300 mOsm/kg</td>
<td></td>
</tr>
<tr>
<td>Interpretive Data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OSMOLALITY, URINE</strong></td>
<td>300 - 900 mOsm/kg</td>
<td>&gt; 850 mOsm/kg after 12 hr fluid restriction</td>
</tr>
<tr>
<td>Interpretive Data:</td>
<td>Urine Osmolality varies with fluid intake.</td>
<td></td>
</tr>
</tbody>
</table>

Thursday, March 19, 2009
### PARATHYROID HORMONE, INTACT, ICMA

**Reference Ranges:** 14.0 - 72.0 pg/mL

#### Interpretive Data:

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

Below is an interpretive guide for the clinical association of serum calcium and serum parathyroid hormone (PTH) levels. Serum calcium and PTH levels should be measured at the same time to be considered together.  **HPT = hyperparathyroidism.**

<table>
<thead>
<tr>
<th>Calcium Normal</th>
<th>Calcium Elevated</th>
<th>Calcium Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH normal</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Parathyroid status</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PTH elevated</th>
<th>Secondary HPT (chronic renal disease) with normal or variable calcium. Nephrolithiasis.</th>
<th>Primary HPT (PTH at 1.1 to 7 times upper reference). Familial benign hypercalcemia. Lithium-induced MEN Type IIA.</th>
<th>Secondary HPT (chronic renal disease) with decreased or variable calcium and PTH at 1.5 to &gt;50 times upper reference. Pseudohypoparathyroidism. Renal tubular acidosis. Rickets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH low</td>
<td>PTH low normal or decreased, consider: Hypercalcemia of malignancy (often with severe hypercalcemia).</td>
<td>PTH decreased: Hypoparathyroidism</td>
<td></td>
</tr>
</tbody>
</table>
PARATHYROID HORMONE,
RAPID OR

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results obtained with other methods cannot be used interchangeably.

Below is an interpretive guide for the clinical association of serum calcium and serum parathyroid hormone (PTH) levels. Serum calcium and PTH levels should be measured at the same time to be considered together. HPT = hyperparathyroidism.

<table>
<thead>
<tr>
<th>Calcium Normal</th>
<th>Calcium Elevated</th>
<th>Calcium Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH normal</td>
<td>Normal Parathyroid status</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calcium Normal</th>
<th>Calcium Elevated</th>
<th>Calcium Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH elevated  Secondary HPT (chronic renal disease) with normal or variable calcium. Nephrolithiasis.</td>
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</tr>
</tbody>
</table>

PTH low PTH low normal or decreased, consider: Hypercalcemia of malignancy (often with severe hypercalcemia). PTH decreased: Hypoparathyroidism

PENTOBARBITAL

Interpretive Data:

PH, URINE

pH 5.0 - 7.0

Interpretive Data:

PHENOBARBITAL

Therapeutic: 15-40 mcg/mL

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.
### PHENYTOIN

**Therapeutic:** 10-20 mcg/mL

**Interpretive Data:**

Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

### PHENYTOIN, FREE

**Therapeutic:** 1-2 ug/mL  
**Toxic:** >3 ug/mL

**Interpretive Data:**

### PHOSPHORUS, SERUM

<table>
<thead>
<tr>
<th>Age</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10 days</td>
<td>4.5 - 9.0 mg/dL</td>
</tr>
<tr>
<td>10 days - 24 mo</td>
<td>4.5 - 6.7 mg/dL</td>
</tr>
<tr>
<td>24 mo - 12 yrs</td>
<td>4.5 - 5.5 mg/dL</td>
</tr>
<tr>
<td>&gt; 12 yrs</td>
<td>2.4 - 4.7 mg/dL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

No reference ranges established for random collection.

### PHOSPHORUS, URINE

0.4 - 1.3 gm/vol/24hrs (varies with diet)

**Interpretive Data:**

### PLASMA FREE HEMOGLOBIN

0 - 50 mg/dL

**Interpretive Data:**

### PLASMINOGEN

<table>
<thead>
<tr>
<th>Age</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>/=&lt; 30 days (full term infant)</td>
<td>50 - 70 %</td>
</tr>
<tr>
<td>&gt; 30 days - Adult</td>
<td>73 - 122 %</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call the Coagulation Lab to obtain reference values for premature healthy infants.

### PLATELET AGGREGATION

Normal response to all agonists as interpreted by the Pathologist

**Interpretive Data:**
PLATELET ANTIBODY (INDIRECT)

Interpretive Data: Negative

PLATELET COUNT

Interpretive Data: PLT: 140 - 440 K/cumm
MPV: 7.4 - 10.4 fl

POTASSIUM, FLUID

Interpretive Data: Interpretation by physician

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

POTASSIUM, SERUM

Interpretive Data: 0-1 mo: 3.2 - 5.4 mmol/L
1 mo - 12 mo: 3.5 - 5.6 mmol/L
> 12 mo: 3.5 - 5.0 mmol/L

POTASSIUM, URINE

Interpretive Data: 25 - 125 mmol/vol/24 hrs
No reference ranges established for random collection
### Reference Ranges for routine tests performed by MUSC Laboratory Services

**Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology**

#### Prealbumin

<table>
<thead>
<tr>
<th>Age</th>
<th>Male Reference Ranges:</th>
<th>Female Reference Ranges:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;18 years of age</td>
<td>18 - 38 mg/dL</td>
<td>18 - 38 mg/dL</td>
</tr>
<tr>
<td>0 minutes - 40 days</td>
<td>3.2 - 15.9 mg/dl</td>
<td>4.2 - 14.4 mg/dL</td>
</tr>
<tr>
<td>40 days - 3 months</td>
<td>2.7 - 17.6 mg/dl</td>
<td>2.5 - 21.9 mg/dl</td>
</tr>
<tr>
<td>3 months - 9 months</td>
<td>7.3 - 27.9 mg/dl</td>
<td>5.3 - 25.0 mg/dl</td>
</tr>
<tr>
<td>9 months - 2 years</td>
<td>6.7 - 28.5 mg/dl</td>
<td>7.3 - 33.7 mg/dl</td>
</tr>
<tr>
<td>2 years - 10 years</td>
<td>6.9 - 31.2 mg/dl</td>
<td>8.0 - 35.2 mg/dl</td>
</tr>
<tr>
<td>10 years - 15 years</td>
<td>6.3 - 33.5 mg/dl</td>
<td>8.6 - 40.7 mg/dl</td>
</tr>
<tr>
<td>15 years - 18 years</td>
<td>8.0 - 41.6 mg/dl</td>
<td>13.7 - 44.1 mg/dl</td>
</tr>
</tbody>
</table>

#### Pregnancy, Qualitative, Urine

- Normal Nonpregnant Females: Negative
- Normal Pregnant Females: Positive

#### Progesterone

- **Male:** <1.4 ng/mL
- **Female:**
  - Follicular Phase: <1.5 ng/mL
  - Luteal Phase: 1.7 - 28.0 ng/mL
  - Post Menopausal: < 0.8 ng/mL

#### Prolactin

- **Male:** 2.1 - 17.7 ng/mL
- **Female:**
  - Nonpregnant: 2.8 - 29.2 ng/mL
  - Pregnant: 9.7 - 208.5 ng/mL
  - Postmenopausal: 1.8 - 20.3 ng/mL

---

Interpretive Data:

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.
PROSTATE SPECIFIC ANTIGEN (PSA)

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.

Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

The lowest reportable level for Total PSA is 0.01 ng/mL by the Bayer Immunoassay method.

PSA has been used as a laboratory tool for monitoring patients with prostate cancer. When used in conjunction with a digital rectal exam, the PSA may assist in the detection of prostate cancer. Blood for PSA testing should be collected before manipulating the prostate to avoid false positive diagnostic information. PSA is tissue-specific rather than tumor-specific and it should not be interpreted as absolute evidence of the presence or absence of malignant disease. The lack of specificity limits the usefulness of the test especially when values fall between 4 - 10 ng/mL, the indeterminate diagnostic range having a 75% false positive rate.

PROSTATE SPECIFIC ANTIGEN, FREE

MEAN PROBABILITY OF FINDING PROSTATE CANCER

<table>
<thead>
<tr>
<th>% Free PSA Ratio</th>
<th>Age 50-59</th>
<th>Age 60-69</th>
<th>Age &gt; 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 10</td>
<td>49.2</td>
<td>57.5</td>
<td>64.5</td>
</tr>
<tr>
<td>11-18</td>
<td>26.9</td>
<td>33.9</td>
<td>40.8</td>
</tr>
<tr>
<td>19-25</td>
<td>18.3</td>
<td>23.9</td>
<td>29.7</td>
</tr>
<tr>
<td>&gt; 25</td>
<td>9.1</td>
<td>12.2</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.

Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.
PROTEIN ELECTROPHORESIS, CSF

Pre-Albumin: 2 - 7 %
Albumin: 56 - 76 %
Alpha 1: 2 - 7 %
Alpha 2: 4 - 12 %
Beta: 8 - 18 %
Gamma: 3 - 12 %

Interpretive Data:

PROTEIN ELECTROPHORESIS, FLUID

Interpretation by Pathologist

Interpretive Data:

PROTEIN ELECTROPHORESIS, SERUM

Albumin: 3.4 - 4.9 gm/dL (55-63%)
Alpha 1: 0.1 - 0.3 gm/dL (1.9-4.7%)
Alpha 2: 0.5 - 1.0 gm/dL (8.5-15%)
Beta: 0.6 - 1.2 gm/dL (9.0-17.6%)
Gamma: 0.6 - 1.7 gm/dL (9.0-22.3%)

Interpretive Data:

PROTEIN ELECTROPHORESIS, URINE

Interpretation by Pathologist

Interpretive Data:

PROTEIN, FLUID (OTHER THAN SPINAL FLUID)

Interpretation by Physician

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

Interpretive Data:

PROTEIN, TOTAL, SERUM

6.0 - 8.0 gm/dL

Interpretive Data:
Reference Ranges for routine tests performed by
MUSC Laboratory Services
Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

**PROTEIN, TOTAL, SPINAL FLUID**
15 - 45 mg/dL

**Interpretive Data:**

**PROTEIN, TOTAL, URINE**
0.050 - 0.100 gm/vol/24 hrs
No reference ranges established for random collection

**Interpretive Data:**

**PROTHROMBIN G20210A FOR MUTATION**
Interpretation by report

**Interpretive Data:**

**PROTHROMBIN TIME (PT)**
12.6 - 15.2 sec

**Interpretive Data:**

The critical PT value which corresponds to an INR of 3.5 has changed from >36.2 sec. to >37.1 sec. due to the yearly change in lot number and subsequent ISI value of the PT reagent.
In patients on warfarin therapy, the range for therapeutic INR (1.5 - 3.5) will depend on the clinical disorder being treated.

**RED BLOOD CELL COUNT (RBC)**

**ADULT**

Male: 5.40 +/- 0.70 M/cumm
Female: 4.80 +/- 0.60 M/cumm

**PEDIATRIC**

0 - 1 mo: 5.30 +/- 0.70 M/cumm
1 - 12 mo: 4.50 +/- 0.50 M/cumm
1 - 15 yrs: 4.70 +/- 0.60 M/cumm

**Interpretive Data:**

**REDUCING SUBSTANCE - URINE**
Negative

**Interpretive Data:**
REDUCING SUBSTANCES, FECAL

Interpretive Data: Negative - Trace

RETICULOCYTE COUNT

Interpretive Data:

**AUTOMATED**

% Reticulocytes:
- 0 - 1 wk: 1.000 - 3.000 %
- 1 - 2 wks: 0.500 - 1.000 %
- Adult: 0.500 - 2.800 %

Absolute Retic. Count:
- 0 - 1 wk: 50.0 - 150.0 K/cumm
- 1 - 2 wks: 25.0 - 50.0 K/cumm
- Adults: 21.0 - 171.0 K/cumm

**MANUAL**

% Reticulocytes:
- 0 - 1 wk: 1.0 - 3.0 %
- 1 - 2 wks: 0.5 - 1.0 %
- Adult: 0.5 - 1.5 %

Absolute Retic. Count:
- 0 - 1 wk: 50 - 150 K/cumm
- 1 - 2 wks: 25 - 50 K/cumm
- Adult: 24 - 92 K/cumm

RHEUMATOID FACTOR, SERUM

Interpretive Data: Effective 1/25/2006, RF is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).

RNP/SM COMPLEX ANTIBODY

Interpretive Data:

Reference Range for each antibody is as follows:
- Negative: <20 EU/mL
- Borderline: 20-25 EU/mL
- Positive: >25 EU/mL

RPR

Interpretive Data: Non-reactive
**RUBELLA ANTIBODY - IgG**

**Interpretive Data:**
- **Positive:** Patients with test values falling on or above 10.0 IU/mL are considered to be positive for the presence of antibody to Rubella virus. The presence of IgG antibodies to rubella virus is an indication of previous exposure to the virus, either through vaccination or prior infection, and a single specimen can be used to estimate the immune status of the individual.
- **Indeterminate:** Patients with test values falling in the range of 5.0 - 9.9. A result of "indeterminate" indicates an intermediate level of IgG antibodies to rubella virus in the sample; recollect and reassay in 1 - 2 weeks.
- **Negative:** Patients with test values falling below 5.0 IU/mL are considered to be negative for the presence of antibody to Rubella virus.

**SALICYLATE**

**Interpretive Data:**
- **Negative:** < 4.0 mg/dL
- **Therapeutic:** 4.0 - 20.0 mg/dL
- **Toxic:** > 30 mg/dL
- **Lethal:** > 60 mg/dL

**SCL-70 ANTIBODY**

**Interpretive Data:**
- **Reference Range for each antibody is as follows:**
- **Negative:** <20 EU/mL
- **Borderline:** 20-25 EU/mL
- **Positive:** >25 EU/mL

**SEDIMENTATION RATE, WESTERGREN**

**Interpretive Data:**
- **M A L E**
  - < 50 yrs: 0 - 15 mm/hr
  - =/> 50 yrs: 0 - 20 mm/hr
- **F E M A L E**
  - < 50 yrs: 0 - 20 mm/hr
  - =/> 50 yrs: 0 - 30 mm/hr

**SEZARY PREP**

**Interpretive Data:** Interpretation by Pathologist
### SICKLE CELL SCREEN

**Interpretive Data:** A positive Sickle Screen is automatically reflexed to a Hemoglobin Electrophoresis. Physicians will be notified of the additional testing.

### SIROLIMUS

**Test methodology:** Liquid Chromatography/Tandem Mass Spectrometry

Levels measured in blood depend on many factors such as the time of blood collection, the dose administered, the co-administration of other substances, drug interactions, the organ transplanted, the preferences of the transplant program, and therapeutic management variables that may differ among patients.

### SMITH ANTIBODY

**Reference Range for each antibody is as follows:**
- **Negative:** <20 EU/mL
- **Borderline:** 20-25 EU/mL
- **Positive:** >25 EU/mL

**Interpretive Data:**

### SODIUM, FLUID

**Interpretation by Physician**

**Interpretive Data:**

- **Disclaimer:** This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

### SODIUM, SERUM

**135 - 145 mmol/L**

**Interpretive Data:**

### SODIUM, URINE

**40 - 220 mmol/vol/24 hrs (varies with diet)**

No reference ranges established for random collection.

**Interpretive Data:**

### SOLUBLE FIBRIN MONOMER COMPLEXES

**Negative**

**Interpretive Data:**
SPECIFIC GRAVITY, BODY FLUIDS

Interpretive Data: See Interpretive data

Physician must interpret based upon origin of fluid & patient's condition. Specific gravity of serous fluids usually vary from 1.010-1.020. Transudates typically have a specific gravity <1.015 and exudates >1.015. However, there is at least a 25% error in misclassification of either transudates or exudates based on specific gravity. Specific gravity of amniotic fluid is normally slightly higher than distilled water.

SPECIFIC GRAVITY, URINE

1.003 - 1.030

Interpretive Data:

SSA (Ro) ANTIBODY

Reference Range for each antibody is as follows:
Negative: <20 EU/mL
Borderline: 20-25 EU/mL
Positive: >25 EU/mL

Interpretive Data:

SSB (La) ANTIBODY

Reference Range for each antibody is as follows:
Negative: <20 EU/mL
Borderline: 20-25 EU/mL
Positive: >25 EU/mL

Interpretive Data:

STREPTOLYSIN O ANTIBODY

<5 yrs: <100 IU,
5-18 yrs: <200 IU,
>18 yrs: <100 IU

Interpretive Data:

SWEAT CHLORIDE

Chloride <40 mmoL/L: Negative
Chloride between 40-60 mmoL/L: Borderline. It is recommended that repeat testing should follow.
Chloride >60 mmoL/L: Consistent with the diagnosis of Cystic Fibrosis.

Interpretive Data:

Sweat collection by iontophoresis; Sweat Chloride measured by a chlorldometer.
SYPHILIS ANTIBODY CSF SCREEN

Interpretive Data:

Non-reactive

SYPHILIS ANTIBODY QUANTITATION

Interpretive Data:

Reactive specimens are reflexed to the Treponema pallidum particle agglutination (TP-PA) test unless they have been reactive for TP-PA in the past.

TACROLIMUS

Test Methodology: Liquid Chromatography/Tandem Mass Spectrometry

Levels measured in blood depend on many factors such as the time of blood collection, the dose administered, the co-administration of other substances, drug interactions, the organ transplanted, the preferences of the transplant program, and therapeutic management variables that may differ among patients.

Interpretive Data:

TESTOSTERONE

Females (Age 15-75): <76 ng/dL
Males (Age 19-71 yrs): 241 - 827 ng/dL

Interpretive Data:

The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers’ assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

THEOPHYLLINE

Therapeutic: 10.0 - 20.0 mcg/mL
Critical: >30.0 mcg/mL

Interpretive Data:

Effective 1/25/2006, Theophylline is measured by a particle-enhanced turbidimetric inhibition immunoassay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer). This assay is FDA-approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/plasma reference ranges do not apply to other sample types. Interpret with caution.

THIOCYANATE

Therapeutic level: 0 - 12 mcg/mL
Toxic: >15 mcg/mL
Nitroprusside therapy: Variable levels

Interpretive Data:
**THROMBIN TIME (TT)**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>=/&lt; 30 days (full term infant)</td>
<td>20.0 - 26.2 sec</td>
</tr>
<tr>
<td>&gt; 30 days - Adult</td>
<td>16.2 - 19.6 sec</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

A prolonged Thrombin Time can be seen under the following conditions:

1. Hypofibrinogenemia or Dysfibrinogenemia
2. In the presence of Heparin contamination of the sample.
3. Due to a non-specific inhibitor eg. Paraproteinemia
4. In the presence of anticoagulants known as Direct Thrombin Inhibitors.
5. Markedly increased levels of Fibrinogen / Fibrin Degradation Products.

Reference ranges for infants less than or equal to 30 days are for full term healthy infants only. Call laboratory (792-0707) to obtain reference values for premature healthy infants.

---

**THYROGLOBULIN**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; or = 55 ng/mL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

Effective 8/1/2006, Thyroglobulin (TG) is measured by a solid phase, chemiluminescent immunometric assay (Immulite 2000, Diagnostic Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods.

The reference interval, less than or equal to 55 ng/mL, is provided as a guideline only. It is recommended that patients with TG greater than 55 ng/mL be evaluated further. Reference: Diagnostic Products Corporation, Immulite 2000 TG assay product literature (PIL2KTY-10, 2005-04-05)

---

**THYROGLOBULIN ANTIBODY**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults</td>
<td>&lt; 40 IU/mL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

Effective 8/1/2006, Thyroglobulin Antibodies (THY Ab) quantitation is performed by a solid phase, enzyme-labeled chemiluminescent immunometric assay (Immulite 2000, Diagnostic Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods.

The reference interval is from the Diagnostic Products Corporation Immulite 2000 Anti-TG Ab assay product literature (PIL2KTG-15, 2005-06-07)

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**THYROID PEROXIDASE ANTIBODY**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>See interpretive data</td>
</tr>
</tbody>
</table>

**Interpretive Data:**

Effective 8/1/2006, Antithyroid Peroxidase Antibodies (TPO ab) quantitation is performed by a solid phase, enzyme-labeled chemiluminescent immunometric assay (Immulite 2000, Diagnostic Products Corporation). Results by other assays should not be used interchangeably due to differences in analytical methods.

The normal level for most patients is less than 35 IU/mL. Anti-TPO antibody levels may vary widely among patients with no history of thyroid disease. The reference interval is from Diagnostic Products Corporation assay literature (Immulite 2000 Anti-TPO ab; PIL2KTO-16, 2005-04-05) and is provided as a guideline only.
THYROID STIMULATING HORMONE (TSH)  0.35 - 5.50 mIU/L

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

THYROXINE (T4)  4.5 - 12.0 mcg/dL

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

THYROXINE, FREE  0.8- 1.9 ng/dL

Interpretive Data: The highest reportable value is 7.0 ng/dL. Free T4 is not amenable to specimen dilution.

TOBRAMYCIN

THERAPEUTIC RANGE
Trough:  < 2 mcg/mL
Peak:  5 - 10 mcg/mL  (Peak may be higher with once daily dosing)
Toxic Peak:  >10 mcg/mL

Interpretive Data: The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Results obtained with other methods cannot be used interchangeably. Reference range adapted from Lexi-Comp's Drug Information Handbook 13th Edition.

TOXOPLASMA GONDII ANTIBODY - IgG  Negative

Interpretive Data: Positive: A result greater than or equal to 8 IU/mL is indicative of a past infection. Indeterminate: A result greater than or equal to 6.5 IU/mL and less than 8 IU/mL is considered indeterminate. Negative: A result less than 6.5 IU/mL is considered to be negative.
**TOXOPLASMA GONDII ANTIBODY - IgM**

<table>
<thead>
<tr>
<th>Value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.89 IV or less</td>
<td>Negative - No clinically significant level of Toxoplasma gondii IgM antibody detected.</td>
</tr>
<tr>
<td>0.90 - 1.09 IV</td>
<td>Equivocal - Repeat testing in 10-14 days may be helpful.</td>
</tr>
<tr>
<td>1.10 IV or greater</td>
<td>Positive - Significant level of Toxoplasma gondii IgM antibody detected and may indicate a current or recent infection.</td>
</tr>
</tbody>
</table>

**TRANSFERRIN**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Reference Range (mg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3 mos</td>
<td>99 - 231</td>
</tr>
<tr>
<td>3 - 12 mos</td>
<td>94 - 377</td>
</tr>
<tr>
<td>1 - 19 yrs</td>
<td>103 - 363</td>
</tr>
<tr>
<td>Adults</td>
<td>202 - 336</td>
</tr>
</tbody>
</table>

**TREPONEMA PALLIDUM PARTICLE AGGLUTINATION**

- Non-Reactive

**TRICYCLIC ANTIDEPRESSANTS (TCA), TOTAL, QUANTITATIVE**

- Therapeutic: <300 ng/mL
- Toxic: >1000 ng/mL

**TRIGLYCERIDES, FLUID**

- Interpretation by physician

**Interpretive Data**

- TOXOPLASMA GONDII ANTIBODY - IgM
- Effective 1/25/2006, Transferrin is measured by an immunoturbidimetric assay (Beckman Coulter Synchron DXC 800 Chemistry Analyzer).
- TREPONEMA PALLIDUM PARTICLE AGGLUTINATION
- Not used to follow treatment.
- TRICYCLIC ANTIDEPRESSANTS (TCA), TOTAL, QUANTITATIVE
- A false positive level for tricyclic antidepressants (TCA) is caused by the four compounds listed below if present in amounts (ng/mL) indicated in parentheses: Quetiapine Fumarate (8.3); Clozapine (60.0); Maprotiline HCL (45.0); Mirtazapine (9.0).
- This information is specific for the Abbott TCA assay kit. (Reference: Abbott Diagnostics Division, Product Information FA15NOV203.)
- TRIGLYCERIDES, FLUID
- Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!
# Reference Ranges for routine tests performed by MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

### TRIGLYCERIDES, SERUM

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt; 150 mg/dL</td>
</tr>
<tr>
<td>Borderline High</td>
<td>150 - 199 mg/dL</td>
</tr>
<tr>
<td>High</td>
<td>200 - 499 mg/dL</td>
</tr>
<tr>
<td>Very High</td>
<td>=/&gt; 500 mg/dL</td>
</tr>
</tbody>
</table>

**Interpretive Data:**
Reference ranges based on ATP III Guidelines (National Cholesterol Education Program 2004 update)

### TRIIODOTHYRONINE (T3), FREE

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3 - 4.2 pg/mL</td>
<td></td>
</tr>
</tbody>
</table>

**Interpretive Data:**
The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences. The highest reportable value is 19.0 pg/ml. Free T3 is not amenable to specimen dilution.

### TRIIODOTHYRONINE (T3), TOTAL

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 - 180 ng/dL</td>
<td></td>
</tr>
</tbody>
</table>

**Interpretive Data:**
The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature. Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

### TROPONIN-I

Effective April 9, 2007, Troponin I testing is performed with the Troponin-I Ultra assay manufactured by Siemens Diagnostics.

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=0.06 ng/mL</td>
<td>Normal, 99th percentile</td>
</tr>
<tr>
<td>=&gt;0.07 ng/mL</td>
<td>Abnormal, including suspected ischemia</td>
</tr>
<tr>
<td>=&gt;0.78 ng/mL</td>
<td>WHO definition of AMI</td>
</tr>
</tbody>
</table>

**Interpretive Data:**
Medical decision for risk stratification based on low concentrations of cardiac troponin I in the indeterminate range should not be based on a single determination at one time point, especially when the sample is the first taken upon patient presentation. The most reliable testing protocol for assessing relative risk require the use of serial marker testing with a minimum of two separate determinations. In accord with published recommendations, serial testing for cardiac troponin I at intervals of 2 to 4 hours for up to 12 hours is suggested in order to corroborate a single troponin I result for the purpose of risk stratification if clinically indicated.
URATE CRYSTALS, SYNOVIAL FLUID

Absent

Interpretive Data:

UREA NITROGEN, FLUID

Interpretation by physician

Interpretive Data:

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

UREA NITROGEN, SERUM

0 - 7 days: 3 - 12 mg/dL
> 7 days: 8 - 20 mg/dL

Interpretive Data:

UREA NITROGEN, URINE

12 - 20 gm/vol/24 hrs (varies with high protein diet)
No reference range established for random collection.

Interpretive Data:

URIC ACID, FLUID

Interpretation by physician

Interpretive Data:

Disclaimer: This test was performed on a specimen type for which the laboratory has not established reference ranges. The test has been validated for serum/plasma specimens only. Interpret results with caution!

URIC ACID, SERUM

Male: 3.5 - 7.5 mg/dL
Female: 2.5 - 6.5 mg/dL

Interpretive Data:

URIC ACID, URINE

0.25 - 0.75 gm/vol/24hrs
No reference range established for random collection.

Interpretive Data:

Reference range is based on a 24 hour volume of urine with a patient on an average diet. For a low Purine diet: < 0.450 gm/bol/24hrs. For a high Purine diet: < 1.000 gm/vol/24hrs
URINALYSIS, ROUTINE

Bilirubin: Negative
Blood: Negative
Glucose: Negative
Ketones: Negative
Leukocyte Esterase: Negative
Nitrite: Negative
pH: 5 - 7
Protein: Negative - Trace
Specific Gravity: 1.003 - 1.030
Urobilinogen: <2.0 mg/dL

NOTE: The significance of trace protein and/or blood detection may vary among patients and clinical judgment is required for assessment.

MICROSCOPICS:

MALE
WBC's - 2/HPF
RBC's - 1/HPF
Epith. Cells (Squamous) - 2/HPF
Hyaline Casts - 2/LPF

FEMALE
WBC's - 3/HPF
RBC's - 3/HPF
Epith. Cells (Squamous) - 5/HPF
Hyaline Casts - 2/LPF

UROBILINOGEN, URINE

0.2 - 1.0 E.U.

UROVYSION by FISH

Interpretive report will be provided

VALPROIC ACID

Therapeutic: 50 - 125 mcg/mL

Effective 1/25/2006, Valproic Acid is measured by a particle-enhanced turbidimetric inhibition immunoassay (Beckman Coulter Synchron DxC 800 Chemistry Analyzer).
**VANCOMYCIN**

**Interpretive Data:**
- Effective 4/27/2006 the Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Results obtained with other methods cannot be used interchangeably. Reference range adapted from Lexi-Comp's Drug Information Handbook 13th Edition.
- Therapeutic levels may vary according to the patient's age, renal function, and severity of the infection.
  - **Therapeutic Range**
    - Therapeutic, Peak: 20.0 - 40.0 mcg/mL
    - Peak, Critical: >80 mcg/mL
  - Therapeutic, Trough: 5.0 - 10.0 mcg/mL
  - Trough, Critical: >30.0 mcg/mL
- This assay is FDA-approved for serum and plasma only. Testing other biological fluids has not been validated. Serum/plasma reference ranges do not apply to other sample types. Interpret with caution.

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**VARICELLA-ZOSTER ANTIBODY - IgG**

**INDEX:**
- Negative: =/< 0.90
- Borderline: 0.91 - 1.09
- Positive: =/> 1.10

**Interpretive Data:**
- Performed by Enzyme Linked Immunoassay. Results from a single specimen may be used to determine immune status. Paired specimens are required to diagnose acute infection.

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**VITAMIN B12**

211 - 911 pg/mL

**Interpretive Data:**
- The Bayer Advia Centaur Immunoassay System (Chemiluminescence Technology) is used to perform this assay. Reference ranges adapted from Bayer method literature.
- Results by other manufacturers' assays for this substance may not be equivalent to results by the Bayer assay and should not be interpreted interchangeably due to methodology differences.

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**VON WILLEBRAND FACTOR ACTIVITY (RISTOCETIN COFACTOR)**

50 - 150 %

**Interpretive Data:**

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**VON WILLEBRAND PANEL**

See individual tests

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Reference Ranges for routine tests performed by
MUSC Laboratory Services

Includes Routine and Special Chemistry, Hematology, Coagulation, Urinalysis, Diagnostic Immunology, Flow Cytometry and Molecular Pathology

<table>
<thead>
<tr>
<th>WBC DIFFERENTIAL</th>
<th>AUTOMATED DIFFERENTIAL -</th>
<th>ADULT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>NEUTROPHIL%</td>
<td>50-75</td>
<td>45-70</td>
</tr>
<tr>
<td>LYMPHOCYTE%</td>
<td>20-45</td>
<td>20-45</td>
</tr>
<tr>
<td>MONOCYTE%</td>
<td>0-10</td>
<td>0-10</td>
</tr>
<tr>
<td>EOSINOPHIL%</td>
<td>0-5</td>
<td>0-5</td>
</tr>
<tr>
<td>BASOPHIL%</td>
<td>0-2</td>
<td>0-2</td>
</tr>
<tr>
<td>ABS. NEUT K/CUMM</td>
<td>2.4-81</td>
<td>2.2-7.6</td>
</tr>
<tr>
<td>ABS. LYMPH K/CUMM</td>
<td>1.0-4.9</td>
<td>1.0-4.9</td>
</tr>
<tr>
<td>ABS. MONO K/CUMM</td>
<td>0.0-1.1</td>
<td>0.0-1.1</td>
</tr>
<tr>
<td>ABS. EOS K/CUMM</td>
<td>0.0-0.5</td>
<td>0.0-0.5</td>
</tr>
<tr>
<td>ABS. BASO K/CUMM</td>
<td>0.0-0.2</td>
<td>0.0-0.2</td>
</tr>
<tr>
<td>PEDIATRICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEUTROPHIL%</td>
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</tr>
<tr>
<td>BAND%</td>
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<td>MONOCYTE%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ABS. BASO K/CUMM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretive Data:

**WHITE BLOOD CELL COUNT (WBC)**

Adult-Male: 7.8 +/- 3 K/cumm
Adult-Female: 7.8 +/- 3 K/cumm
Pediatric:
0-1 mo: 12.0 +/- 6 K/cumm
1-12 mo: 10.0 +/- 4 K/cumm
1-14 yrs: 8.0 +/- 3 K/cumm

Interpretive Data:

WBC count will be corrected for the presence of Nucleated RBC’s.