

Analyte	Lab(s)	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website. <a href="https://clinicallabs.osumc.edu">https://clinicallabs.osumc.edu</a></b>				
<i>This document applies all laboratory testing at OSUWMC Clinical Laboratories. This includes:</i>				
Ackerman Laboratories: 680 Ackerman Rd Rm 429, Columbus OH 43202				
Morehouse Laboratory: 1st Fl Morehouse Medical Plaza Tower, 2050 Kenny Rd, Columbus OH 43221				
Spellman Laboratory: 1145 Olentangy River Rd Rm 2030, Columbus OH 43212				
Clinical Laboratories (UH): 410 West 10th Avenue, Columbus OH 43210				
East: 181 Taylor Avenue, Columbus OH 43203				
<b>C Reactive Protein</b>	CCL	mg/L	All <10.00	Clinical Guide to Laboratory Tests, Tietz, 2005
<b>Hexagonal Phospholipid Neutralization</b>	CCL	seconds	<10.8 sec	OSUWMC, in house reference range study performed yearly
<b>Urine Specific Gravity</b>	CCL, UHE, James, MMMP, SSCBC	N/A	1,001-1,035	Urinalysis and Body Fluid, Rimesrud 1995
<b>Urine Screen</b>	CCL, UHE, James, MMMP, SSCBC	N/A	various	various
<b>ABO / RH(D)</b>	Blood Bank (UH and UHE)	N/A	A, B, O, or AB and Rh positive or Rh Negative	NA
<b>Acetaminophen</b>	RRL James	mcg/mL	Therapeutic: 10 - 32	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002 Applied Therapeutics, Inc. and Micromedex On OSU Intranet.
<b>Acetone, serum</b>	Tox	mg/dL	none detected	NA
<b>Acid Fast Bacilli Culture and Smear</b>	Microbiology	N/A	Collect Time is required for each specimen submission. Normal is negative.	N/A
<b>Acid Fast Bacilli Smear</b>	Microbiology	N/A	Collect Time is required for each specimen submission. Normal is negative.	N/A
<b>Acid Fast Bacilli Susceptibility Testing</b>	Microbiology	N/A	N/A	N/A
<b>Acinetobacter Culture</b>	Microbiology	N/A	Negative	N/A
<b>ACTH</b>	Special Functions	pg/mL	<5-6ppg/mL	Textbooks, Package insert
<b>Actionmyces Screen</b>	Microbiology	N/A	Negative	N/A
<b>ADAMTS13 Activity / Inhibitor</b>	BRL	% / BU	Activity: 68.0%-131.0% / Inhibitor: <0.5	Biomarker Ref. Lab
<b>Alanine Aminotransferase (ALT)</b>	CCL, RRL, James, MMMP, SSCBC	U/L	Female: 18+ years 9-48 Male: 18+ years: 10-52	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999 (Lower end of reference range modified to agree with the linear limits.)
<b>Albumin</b>	CCL, RRL, James MMMP, SSCBC	g/dL	19+ years 3.5-5.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999 / Synchron Performance Verification Manual A22219
<b>Albumin, Fluid</b>	CCL	g/dL	Peritoneal and Pleural: Differences between serum-fluid gradients of >1.2 g/dL indicate transudates while differences <1.2 g/dL indicate exudates.	Roth, B.J., et al. Chest, Vol 98, 546-549, 1990
<b>Alcohol Volatiles Serum Legal</b>	Tox	g/dL	none detected	NA
<b>Alcohol, Beverage</b>	Tox	pos/neg	NA	NA
<b>Alcohol, Ethyl-Blood</b>	Tox	mg/dL	none detected	NA
<b>Alcohol, Ethyl Forensic-urine</b>	Tox	g/dL	none detected	NA
<b>Alcohol, Ethyl, Forensic- Whole Blood</b>	Tox	g/dL	none detected	NA
<b>Alcohol, Ethyl-Urine</b>	Tox / UHE	mg/dL	none detected	NA
<b>Alcohol, Isopropyl-Serum</b>	Tox	mg/dL	none detected	NA
<b>Alcohol, Methyl-Serum</b>	Tox	mg/dL	none detected	NA
<b>Aldosterone</b>	Special Functions	ng/dL	Upright (serum): <3.0-39.2; Supine (Serum): <3.0-23.2; Upright (EDTA): <3.0-35.3; Supine (EDTA): <3.0-23.6	package insert
<b>Alkaline Phosphatase (ALP)</b>	CCL, RRL, James MMMP, SSCBC	U/L	19+ Years 32-126	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999 / Synchron Performance Verification Manual A22219
<b>ALP, Fluid</b>	CCL	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Alpha 1 Antitrypsin</b>	CCL (moved from SF 4/29/15)	mg/dL	84-218	package insert
<b>Alpha-fetoprotein Tumor marker</b>	Special Functions	ng/mL	Female: <8.5 ng/mL Male: <8.5 ng/mL The reference range and other method performance specifications have not been established for this fluid specimen.	Package insert, Textbook, Operators Manual.
<b>ALT, Fluid</b>	CCL	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Alternative Activation Pathway</b>	BRL	ng/mL	244 - 961	Biomarker Ref. Lab
<b>Amikacin</b>	Tox	mcg/mL	Therapeutic: Peak: 30 - 60; Trough: < 6	OSU Pharmacy
<b>Amikacin NON HUMAN</b>	Tox	mcg/mL	NA	NA
<b>Amikacin, Peak</b>	Tox	mcg/mL	Therapeutic: Peak: 30 - 60	OSU Pharmacy
<b>Amikacin, Trough</b>	Tox	mcg/mL	Therapeutic: Trough: < 6	OSU Pharmacy
<b>Ammonia (arterial)</b>	CCL	umol/L	All 11.0-35.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Ammonia (venous)</b>	CCL, RRL, MMMP, James	umol/L	All 11.0-35.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Amphetamine confirmation - Urine</b>	Tox	pos/neg	none detected	NA
<b>Amphetamines and Cathinones Confirmation-urine forensic</b>	Tox	ng/mL	none detected	NA
<b>Amphetamines Screen-Urine</b>	Tox / UHE	pos/neg	none detected	NA
<b>Amylase</b>	CCL, RRL, James, MMMP	U/L	19+ years 20-103	OSU validated 48 outpatients from Family Practice See Method Val binders. Pediatric Reference Ranges, Soldin, 1999
<b>Amylase, Fluid</b>	CCL	U/L	Pleural: Fluid amylase measurements greater than the reference interval for serum or a fluid to serum amylase ratio greater than 1.0 may suggest acute pancreatitis, chronic pancreatic pleural effusion, or esophageal leakage.	State of the art. The pleura Sahn SA Am Rev Respir Dis. 1988;138(1):184.
<b>Amylase, urine (24 Hour)</b>	CCL	U/24 hrs,	24 hour sample: 0-400	OSU validated 48 outpatients from Family Practice See Method Val binders
<b>Amylase, urine (Random)</b>	CCL	U/L	None established	NA
<b>ANA Screen Only, Mul</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>ANA Screen w Reflex</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>ANA Titer*</b>	Special Functions	N/A	Normal is Negative	Textbooks
<b>Anaerobic Culture</b>	Microbiology	N/A	Collect Time is required for each specimen submission	N/A
<b>Anaerobic Identification</b>	Microbiology	NA	NA	N/A
<b>Anion Gap (Calculation)</b>	CCL, RRL, James MMMP, SSCBC	mmol/L	7-17	OSUWMC Study 2015
<b>Anti Xa for LMW Heparin, 4hr Post Dose</b>	CCL	IU/mL	0.60-1.00 (Therapeutic Range)	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.
<b>Antibody Identification</b>	Blood Bank	N/A	NA	NA
<b>Antibody Screen</b>	Blood Bank	N/A	Positive or Negative	NA
<b>Antibody Titer</b>	Blood Bank	N/A	Reciprocal of serial dilution	All antigens but K has a critical value of 32, K has a critical value of 8
<b>Anti-Cardiolipin IgM</b>	CCL	CU	≤ 20	Inova Quanta-Flash Package Insert Verified in house
<b>Anti-Cardiolipin Antibody IgG (retired)</b>	CCL	GPL units	IgG 0-15	Inova Package Insert 07/2011; Validated in house
<b>Anti-Cardiolipin Antibody IgG (retired)</b>	CCL	MPL units	IgM 0-12.5	Inova Package Insert 07/2011; Validated in house
<b>Anti-Cardiolipin IgG</b>	CCL	CU	≤ 20	Inova Quanta-Flash Package Insert Verified in house
<b>Anti-CCP</b>	Tox	U/mL	<5.0	Abbott
<b>Anti-Centromere Ab</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Anti-ENA</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Antigen Typing, Red Cell</b>	Blood Bank	N/A	Positive or Negative	NA
<b>Anti-Mitochondrial A</b>	Special Functions	Pos/ Neg	Normal is Negative	Textbook
<b>Anti-Neutrophil Cytoplasm</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Antinuclear Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Textbooks
<b>Anti-ribosomal Ab</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Anti-streptolysin O</b>	CCL (moved from SF 4/29/15)	IU/mL	<250	Package Inserts
<b>Antithrombin III (AT III)</b>	CCL	%	17+ years: 85-118	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol. Vol 12, 95-104, Andrew, 1990
<b>Anti-TPO AB (Microsomal AB)</b>	Special Functions	IU/mL	<35.0IU/mL	Package Insert
<b>Arterial Blood Gas</b>	CCL, RT, MMMP	various	various	various
<b>Aspartate Aminotransferase (AST)</b>	CCL, RRL, James MMMP, SSCBC	U/L	19+ years 14-40	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
<b>AST, Fluid</b>	CCL	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Auto Immune Abs, Mul</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Autoabsorption, RBC</b>	Blood Bank	N/A	NA	NA
<b>Autoclave Spore Check</b>	Microbiology	N/A	Negative	N/A
<b>Bacterial Identification</b>	Microbiology	NA	NA	N/A
<b>Bacterial Identification from Cell Therapy Products</b>	Microbiology	NA	NA	N/A
<b>Bands %</b>	CCL, RRL, James, MMMP, SSCBC	%	0-7	OSU Internal Normal Range Study, 2008 and Clinical Guide to Laboratory Tests, Tietz, 1995

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<b>Bands Absolute</b>	CCL, RRL, James, MMMP, SSCBC	x10 <sup>9</sup> /uL	0-0.7	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Barbiturate confirmation - urine qualitative</b>	Tox	pos/neg	none detected	NA
<b>Barbiturate confirmation - forensic blood qualitative</b>	Tox	pos/neg	none detected	NA
<b>Barbiturates Screen-Serum</b>	Tox	pos/neg	none detected	NA
<b>Barbiturates Screen-Urine</b>	Tox / UHE	pos/neg	none detected	NA
<b>Base Excess/Deficit - Blood Gas</b>	CCL and RT	mmol/L	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Basophils, %</b>	CCL, RRL, James, MMMP, SSCBC	%	0.0-2.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Basophils, Absolute</b>	CCL, RRL, James, MMMP, SSCBC	x10 <sup>9</sup> /uL or K/uL	0.0-0.2	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Benzodiazepine confirmation - urine qualitative</b>	Tox	pos/neg	none detected	NA
<b>Benzodiazepines Screen-Urine</b>	Tox / UHE	pos/neg	none detected	NA
<b>Beta 2 Microglobulin</b>	Special Functions	mg/L	0.60-2.11 mg/L	Package insert, Operators manual, Textbook
<b>Beta -HCG, Quantitative</b>	CCL, RRL, James	mIU/mL	Non-pregnant: <10 Postmenopausal: <10 2-4 Weeks: 39.1-8,388 5-6 Weeks: 861-88,769 8-10 Weeks: 18,700-244,467 10-12 Weeks: 23,143-181,899 13-27 Weeks: 6,303-97,171 28-40 Weeks: 4,360-74,833	Advia Centaur Assay Manual, Total HCG 10634917_EN Rev. F, 2011-04
<b>BHCG, qualitative (serum)</b>	CCL, RRL, James, SSCBC	Qualitative	Non-pregnant = Negative Pregnant = Positive	Package Insert
<b>BHCG, qualitative (urine)</b>	CCL, RRL, James, MMMP, SSCBC	Qualitative	Non-pregnant = Negative Pregnant = Positive	Package Insert
<b>B-Hydroxybutyrate</b>	CCL, RRL	mmol/L	0.02-0.27	Starbio - Package Insert
<b>Bicarbonate (HCO<sub>3</sub>) - Blood Gas</b>	CCL, RT, MMMP	mmol/L	>31days: 22-26	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Bilirubin, direct (BIL.D)</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	All < 0.3	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Bilirubin, direct, Diazo (neonatal)</b>	CCL	mg/dL	All <0.3	N/A
<b>Bilirubin, Direct; Body Fluid</b>	CCL	mg/dL	Peritoneal: Elevated peritoneal bilirubin may suggest bile within the abdomen.	Ascitic fluid bilirubin concentration as a key to choleperitoneum. Runyon BA J Clin Gastroenterol. 1987;9(5):543.
<b>Bilirubin, Total (BIL.T)</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	Adult: <1.5	Clinical Guide to Laboratory Tests, Kaplan, 2003
<b>Bilirubin, Total, Neonatal,</b>	CCL	mg/dL	0 days: 1.4-8.7, ID: 3.4-11.5, SD: 1.5-12.0, 5D: 0.3-1.2, 1Y <1.5	Clinical Guide to Laboratory Tests, Kaplan, 2003
<b>Bilirubin, Total; Body Fluid</b>	CCL	mg/dL	Peritoneal: Elevated peritoneal bilirubin may suggest bile within the abdomen.	Ascitic fluid bilirubin concentration as a key to choleperitoneum. Runyon BA J Clin Gastroenterol. 1987;9(5):543.
<b>BK Virus Viral Load, Plasma</b>	Microbiology	copies/mL	<500 copies/mL	Validation
<b>BK Virus Viral Load, Urine</b>	Microbiology	copies/mL	<500 copies/mL	Validation
<b>Blast %</b>	CCL, RRL, James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Blood Culture for Acid Fast Bacilli</b>	Microbiology	N/A	Reference Range-Negative. Collect Time is required for each specimen submission.	N/A
<b>Blood Culture Partial Identification</b>	Microbiology	NA	NA	N/A
<b>Blood Culture, Fungus</b>	Microbiology	N/A	Reference Range-Negative. Collect Time is required for each specimen submission.	N/A
<b>Blood Culture, Indwelling Line</b>	Microbiology	N/A	no growth	Validation
<b>Blood Culture, Pediatric</b>	Microbiology	N/A	No growth	N/A
<b>Blood Culture, Routine</b>	Microbiology	N/A	No growth	N/A
<b>Blood Culture, Routine #2</b>	Microbiology	N/A	No growth	N/A
<b>Blood FT/HT</b>	RRL, James	mg/dL	None detected	N/A
<b>Blood Product Culture, Protocol</b>	Microbiology	NA	Negative	N/A
<b>Blood Product Culture, Suspected Transfusion Reaction</b>	Microbiology	NA	Negative	N/A
<b>BNP</b>	CCL, RRL, James	pg/mL	All 0-100	Advia Centaur Assay Manual, BNP 10629823 EN Rev. P, 2011-07
<b>Body Fluid Cell Count</b>	CCL, RRL	/uL	N/A	N/A
<b>Body Fluid Culture</b>	Microbiology	N/A	N/A	N/A
<b>Body Fluid Differential</b>	CCL, RRL	%	N/A	N/A
<b>Body Fluid Hematocrit</b>	CCL	%	N/A	N/A
<b>Bone Marrow Collection (Assist)</b>	James	N/A	N/A	N/A
<b>BR (CA27-29)</b>	CCL	U/mL	All 0.0-38.6	Advia Centaur Assay Manual, BR (CA 27.29) 116751 Rev. J, 2009-07
<b>BUN</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	All 7-22	OSUWMC Reference Range Study effective 12.11.2013
<b>Buprenorphine Screen - Meconium</b>	Tox	pos/neg	none detected	NA
<b>Buprenorphine Screen-Urine</b>	Tox / UHE	pos/neg	none detected	NA
<b>C3</b>	CCL (moved from SF 4/29/15)	mg/dL	87-200	Package Insert verified by OSU Study
<b>C4</b>	CCL (moved from SF 4/29/15)	mg/dL	18-52	OSU Study
<b>CA 15-3</b>	Special Functions	U/mL	Female: 0-32 U/mL Male: 0-32 U/mL	Package insert, Operators manual, Textbook
<b>CA125II</b>	CCL	U/mL	All 0.0-30.0	Advia Centaur Assay Manual, CA 125II 128516 Rev. H, 2009-02
<b>CA19-9</b>	CCL	U/mL	All 0.0-37.0	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information
<b>Calcitonin</b>	Special Functions	pg/mL	Male: less than 8.4 Female: less than 5.0	Kit Range
<b>Calcium</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	19+ years 8.6-10.5	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
<b>Calcium / Creatinine Ratio, urine (Random)</b>	CCL, RRL	Ca mg / Creat mg	0-6 months: <0.86, 7-18 months: <0.60, 19 months-2 years: <0.42, >2years: <0.22	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Calcium, Fluid</b>	CCL	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Calcium, urine</b>	CCL, RRL	mg/dL	100-300	N/A
<b>Calcium, urine (24 hours)</b>	CCL	mg/ 24 hours (Random mg/dL)	100-300	N/A
<b>Candida albicans DNA Probe, vaginal</b>	Microbiology	N/A	Negative	N/A
<b>Candida albicans Identification</b>	Microbiology	NA	NA	N/A
<b>CAPD Fluid Culture and Smear</b>	Microbiology	N/A	Collect Time is required for each specimen submission.	N/A
<b>Carbamazepine</b>	CCL	mcg/mL	All 4.0-12.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001 Intraneal Micromedex, OSU
<b>Carboxhemoglobin (COHb) - Blood Gas</b>	CCL	%	0.5 - 1.5%	ABL 800 Flex Reference Manual
<b>Catheter Tip Culture</b>	Microbiology	N/A	Negative. Vascular Catheter tip cultures are interpreted in conjunction with blood culture results.	N/A
<b>CBC (Complete Blood Count)</b>	CCL, RRL, James, MMMP, SSCBC	various	various	various
<b>CBC (Complete Blood Count) with differential</b>	CCL, RRL, James, MMMP, SSCBC	various	various	various
<b>CEA</b>	CCL	ng/mL	All 0.0-5.0	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information
<b>Centromere Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Ceruloplasmin</b>	CCL (moved from SF 4/29/15)	mg/dL	10-40	OSU Study
<b>Chlamydia trachomatis &amp; Neisseria gonorrhoeae NAAT Testing</b>	Microbiology	RLU (Relative Light Units)	Negative	Validation
<b>Chlamydia trachomatis NAAT testing</b>	Microbiology	RLU (Relative Light Units)	Negative	Validation
<b>Chlamydia trachomatis NAAT with Reflex to Neisseria gonorrhoeae</b>	Microbiology	RLU (Relative Light Units)	Negative	Validation
<b>Chloride</b>	CCL, RRL, James, MMMP, SSCBC	mmol/L	18+ years 98-108	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
<b>Chloride, Fluid</b>	CCL	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Chloride, urine (24 hours)</b>	CCL	mmol/24hrs	24 Hour sample: 110-250	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Chloride, urine (Random)</b>	CCL, RRL	mmol/L	Random: None established	N/A
<b>Cholesterol</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	19+ years < 200	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
<b>Cholesterol, Fluid</b>	CCL	mg/dL	Pleural: A pleural cholesterol measurement greater than 45 mg/dL is one component of the diagnostic criteria for exudates.	Diagnostic value of tests that discriminate between exudative and transudate pleural effusions. Primary Study Investigators Hefner JE, Brown LK, Barberi CA Chest. 1997;111(4):970.
<b>Chromatin Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Ciprofloxacin Resistance Screening</b>	Microbiology	N/A	N/A	N/A
<b>CKMB</b>	CCL	ng/mL	All 0.0-5.0	Immunochimistry Normal Reference Validation Manual located in Managers office.
<b>Classical Activation Pathway</b>	BRL	ng/mL	279 - 1846	Biomarker Ref. Lab
<b>Clostridium difficile Testing by PCR</b>	Microbiology	N/A	Negative	N/A
<b>CMV by PCR</b>	Microbiology	copies / mL	Not detected	Literature
<b>CMV IgG Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Textbooks, Package insert.
<b>CMV IGM ANTIBODY</b>	Special Functions	Pos/ Neg	Normal is Negative	package insert
<b>CO<sub>2</sub></b>	CCL, RRL, James, MMMP, SSCBC	mmol/L	3+ years 22-30	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
<b>CO<sub>2</sub>, Fluid</b>	CCL	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Cocaine confirmation - urine</b>	Tox	pos/neg	none detected	NA
<b>Cocaine Confirmation- Blood Quantitation Forensic</b>	Tox	mg/mL	none detected	NA
<b>Cocaine Confirmation- Urine Quantitation Forensic</b>	Tox	mg/mL	none detected	NA
<b>Cocaine Screen-urine</b>	Tox / UHE	pos/neg	none detected	NA
<b>Cold Agglutinin Titer</b>	Blood Bank	N/A	Reciprocal of serial dilution	NA
<b>Confirmatory RPR*</b>	Special Functions	Pos/ Neg	Negative is Normal	ASI RPR package insert 6/10
<b>Cord Blood Evaluation</b>	Blood Bank	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, DAT Positive or Negative	NA

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Cortisol	CCL	mcg/dL	All 3.09-22.40	Advia Centaur Assay Manual, Cortisol 04670726 Rev. G, 2009-12
C-Peptide	Special Functions	ng/mL	0.2-2.7	OSU validated Range
Creatine Kinase (CK)	CCL, RRL, James, MMMP	U/L	Female: 19+ years 30-184 Male: 19+ years 30-220	OSUWMC Reference Range Study effective 12/11/2013; Pediatric Reference Ranges, Soldin, 1999
Creatinine	CCL, RRL James, MMMP, SSCBC	mg/dL	19+ years: Male 0.7-1.3, Female 0.5 - 1.2	OSUWMC Reference Range Study effective 12/11/2013; Pediatric Reference Ranges, Soldin, 1999
Creatinine -Urine Adulteration Screen	Tox	mg/mL	≥20	SAMSHA
Creatinine, Fluid	CCL	mg/dL	Peritoneal: Peritoneal fluid urea nitrogen and creatinine levels that are greater than serum levels may imply intraperitoneal leakage of urine outside of the urinary tract. Normal reference intervals for peritoneal creatinine and urea are thought to be equivalent to those of serum.	Peritoneal fluid urea nitrogen and creatinine reference values. Obstet Gynecol. Manahan KJ, Fanning J. 1999 May;93(5 Pt 1):780-2.
Creatinine, urine (24 hours)	CCL, RRL, MMMP, SSCBC, James	g/ 24 Hours	18+ years male: 0.8-2.0 View additional reference ranges	NKDEP traceable -Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
Creatinine, urine (Random)	CCL, RRL, MMMP, SSCBC, James	mg/dL	None established	N/A
Crossmatch	Blood Bank	N/A	Compatible or Incompatible	NA
CRP High Sensitivity	CCL	mg/L	All >3.0 Non Specific >10.00 High Average 1.0-3.0 Low <1.0	Beckman Coulter CRP Latex package insert; BAOSR6x99.04, 1.2012
Cryptococcus Antigen	Special Functions	Pos/ Neg	Normal is Negative	Package Insert
Cryptococcus Antigen, CSF	Special Functions	Pos/ Neg	Normal is Negative	Package Insert
Cryptococcus, quantitative*	Special Functions	N/A	Negative is Normal	Package Insert
Cryst Identification	CCL, RRL	N/A	Neg	N/A
CSF LYM	CCL, RRL	%	<3m: 50-35 / >3m 40-80	Body Fluids 3rd ed. Kjeldsberg, Knight 1993 , Coulter LH Workstation BF Application, Issue B, 11/06
CSF MON	CCL, RRL	%	<3m 50-90 / >3m 15-45	Body Fluids 3rd ed. Kjeldsberg, Knight 1993 , Coulter LH Workstation BF Application, Issue B, 11/06
CSF RBC	CCL, RRL	/uL	All Ages: <3	Body Fluids 3rd ed. Kjeldsberg, Knight 1993 , Coulter LH Workstation BF Application, Issue B, 11/06
CSF SEG	CCL, RRL	%	<3m: 0-8 / >3m: 0-6	Body Fluids 3rd ed. Kjeldsberg, Knight 1993 , Coulter LH Workstation BF Application, Issue B, 11/06
CSF WBC	CCL, RRL	/uL	<1y: <31; 1-4y <21, >=5y <6	Body Fluids 3rd ed. Kjeldsberg, Knight 1993 , Coulter LH Workstation BF Application, Issue B, 11/06
Cyclosporine	Tox	ng / mL	Therapeutic: 70 - 320	OSU Pharmacy
Cyclosporine NON HUMAN	Tox	ng/mL	NA	NA
Cyclosporine, 2 hour	Tox	ng/mL	Therapeutic: 320 - 900	OSU Pharmacy
Cytomegalovirus Testing by PCR, blood, quantitative	Microbiology	copies/mL	<119 copies/mL	Literature / History
Cytomegalovirus Testing by PCR, CSF	Microbiology	copies/mL	Not Detected	Literature / History
DAT, Direct Antiglobulin	Blood Bank	N/A	Positive or Negative	NA
D-Dimer, High Sensitivity	CCL, RRL, James	mcg/mL FEU	<0.50	OSU Lab Normal Range Study 08/2007
Dermatophyte Identification	Microbiology	NA	NA	NA
DHEA Sulfate	Special Functions	µg/dL	Female: 35-430, Male: 80-560	Package insert, textbook
DIC Work Up	CCL	N/A	NA	NA
Disosin	CCL, RRL	ng/mL	0.5-1.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, Bauer, 2001
Dilute Russell Venom Time (DRVVT)	CCL	Ratio	<1.27	OSUWMC, in house reference range study performed yearly
Donor unit retype	Blood Bank	N/A	A, B, O, or AB and Rh positive or Rh Negative	NA
Drug Panel 10, meconium (Drugs of Abuse Screen-meconium)	Tox	pos/neg	none detected	NA
Drug Panel 10, Urine (Drugs of Abuse Screen-urine)	Tox, RRL	pos/neg	none detected	NA
Drug Panel 10, with Creatinine Urine (Drugs of Abuse Screen-urine)	RRL	Drugs: pos/neg	none detected	NA
DS DNA Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
dsDNA Antibody Quant*	Special Functions	IU/mL (pos/neg)	<4, neg; 5-9, indeterminate; > 10 pos	Package insert
EBV VCA IgG Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package Insert
EBV VCA IgM Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package Insert
Electrophoresis, Urine	Special Functions	%	Normal is Negative	Package Insert
Elution, RBC	Blood Bank	N/A	NA	NA
ENA Battery, Multiple	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
Enterovirus by PCR	Microbiology	N/A	Not detected	Package Insert
Environmental Culture for Legionella	Microbiology	N/A	Collect Time is required for each specimen submission.	N/A
Eosinophils, %	CCL, RRL James, MMMP, SSCBC	%	0.0-5.0	Clinical Guide to Laboratory Tests, Tietz, 1995
Eosinophils, Absolute	CCL, RRL James, MMMP, SSCBC	x10 <sup>6</sup> /uL or K/uL	0.0-0.5	Clinical Guide to Laboratory Tests, Tietz, 1995
Epstein Barr Virus Testing by PCR, blood, quantitative	Microbiology	copies/mL	<2000 copies/mL	Validation
Epstein Barr Virus Testing by PCR, CSF	Microbiology	copies/mL	Not Detected (<516 copies/mL)	Validation
Erythrocyte Sedimentation Rate (ESR)	CCL, RRL	mm/hr	Male: >85Y <30, 50-85Y <20, 0-49Y <15 / Female: >85Y <42, 50-85Y <30, 0-49Y <20	JB Henry, Clinical Diagnosis & Mgmt., 19th Ed., 1996, pg. 1460
Estradiol Enhanced eE2	CCL	pg/mL	Male: 19+ years <11.8-39.8 Adult Female follicular phase: 19.5-144.2 Midcycle Phase: 63.9-356.7 Luteal Phase: 55.8-214.2 Post Menopausal: <11.8-32.2	Advia Centaur Assay Manual, Enhanced Estradiol (eE2)10491467 Rev. C, 2010-09 ;Pediatric Reference Ranges, Soldin, 1999
Ethanol	Tox	mg/dL	none detected	NA
Ethylene Glycol (Confirmation)	Tox	mg/dL	<10	NA
Ethylene Glycol (Screen)	Tox	mg/dL	none detected	NA
Ethylene Glycol NON HUMAN	Tox	mg/dL	none detected	NA
Everolimus	Tox	ng/mL	Therapeutic range not established	Microgenics Corp. Thermo Scientific OMS Everolimus IFU
Factor Antibody	CCL	Bethesda units	Negative (0 Bethesda units)	N/A
Factor II	CCL	% Activity	17+ years: 60-150	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor IX	CCL	% Activity	17+ years: 77-147	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor IX Antibody	CCL	Bethesda units	Negative (0 Bethesda units)	NA
Factor V	CCL	% Activity	17+ years: 50-150	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor VII	CCL	% Activity	17+ years: 65-135	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor VIII	CCL	% Activity	17+ years: 75-220	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor VIII Antibody	CCL	Bethesda units	Negative (0 Bethesda units)	NA
Factor X	CCL	% Activity	17+ years: 60-130	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor XI	CCL	% Activity	17+ years: 65-135	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Factor XIII	CCL	N/A	present	NA
Ferritin	CCL	ng/mL	Female: 17+ years 10-291 Male: 17+ years: 22-322	Advia Centaur Ferritin package insert 111653 Rev. L, 2008-09; Pediatric Reference Ranges, Soldin, 1999
Fetal Fibronectin (FFN)	CCL	Qualitative	All Negative	FFN Package Insert Rev. M
Fetal Lung Maturity - Lamellar Body Count (removed 4/5/2016)	CCL	K/uL	>39 normal, <39immature	NA
Fetal Screen	Blood Bank	N/A	Positive or Negative	NA
Fibrinogen (FIB)	CCL, RRL	mg/dL	220-410	OSU Lab Normal Range Study 05/2003
FIOB, Stool	CCL	N/A	Negative	NA
Fluid CEA	CCL	ng/mL	The reference range and other method performance specifications have not been established for this fluid specimen.	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information
Fluid pCO2 (by blood gas analyzer)	CCL	mmHg	NA	NA
Fluid pH (by blood gas analyzer)	CCL	pH	NA	NA
Fluid pO2 (by blood gas analyzer)	CCL	mmHg	NA	NA
Folate	CCL	ng/mL	19+ years >5.38	Advia Centaur Assay Manual, Folate 119514 Rev. P, 2010-01; Pediatric Reference Ranges, Soldin, 1999
Free Hemoglobin, plasma	Special Functions	mg/dL	0.0-5.0 mg/dL	HemoCue Operating Manual
Free T3	CCL	ng/mL	19+ years 2.3-4.2	Advia Centaur Assay Manual, FT3 1062983 EN Rev. J, 2011-03
Free T4	CCL, RRL, James	ng/dL	19+ years 0.89-1.76	Advia Centaur Assay Manual, FT4 04662499 Rev. D, 2009-06; Pediatric Reference Ranges, Soldin, 1999
FSH	CCL	mIU/mL	Male <18.1 Female, follicular 2.5-10.2 Female, midcycle 3.4-33.4 Female, luteal 1.5-9.1 Female, pregnant <0.3 Female, post-menopausal 23.0-116.3	Advia Centaur Assay Manual, FSH package insert, 111714 Rev. J, 2008-09
Fungal Smear	Microbiology	N/A	Negative	N/A
Fungal Susceptibility Testing	Microbiology	N/A	N/A	N/A
Fungus Culture	Microbiology	NA	Collect Time is required for each specimen submission. No growth	N/A
Fungus Culture; Hair, Skin	Microbiology	N/A	Collect Time is required for each specimen submission.	N/A
G-6-PD Screen	Special Functions	Present/Absent	Present is Normal	Package Insert

Analyte	Lab(s)	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website, https://clinicallabs.osumc.edu</b>				
<b>Gamma Glutamyl Transferase (GGT)</b>	CCL, RRL, MMMP, SSCBC	U/L	19+ years 8-64	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999 (Lower end of reference range modified to agree with the linear limits.)
<b>Gastrin Releasing Peptide (discontinued 5/13/2016)</b>	Special Functions	pg/mL	Less than 500	OSU validated Range
<b>Gastrin, Drug Stimulated</b>	Special Functions	pg/mL	0-122	OSU validated range
<b>Gastrin, non-stimulated</b>	Special Functions	pg/mL	0-122	OSU validated Range
<b>Genital Culture</b>	Microbiology	N/A	normal flora or no growth, depending on site	Validation
<b>Gentamicin and Amikacin, CSF</b>	Tox	ug/mL	>20 ug/mL	Clinical Infectious Diseases 2004
<b>Gentamicin, Peak</b>	Tox	ng/mL	3-15	OSU Pharmacy
<b>Gentamicin, Trough</b>	Tox	ng/mL	≤1.0	OSU Pharmacy
<b>Germ Tube Test</b>	Microbiology	NA	NA	NA
<b>GHB, Serum</b>	Tox	mcg/mL	none detected	NA
<b>GHB, Urine</b>	Tox	mcg/mL	none detected	NA
<b>Giardia lamblia Antigen Test</b>	Microbiology	N/A	Negative	NA
<b>Glucagon</b>	Special Functions	pg/mL	25-250	Kit Runge Standardized against WHO 69/194 glucagon
<b>Glucose</b>	CCL, RRL, James, MMMP, SSCBC	mg/dL	1+ years 70-99	ADA Standards October 2012, Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
<b>Glucose - Blood gas</b>	CCL	mg/dL	1+ years: 70-99	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
<b>Glucose, CSF</b>	CCL, RRL	mg/dL	All 40-70	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Glucose, Fluid</b>	CCL, RRL	mg/dL	Peritoneal: Peritoneal glucose concentrations generally remain >50 mg/dL (2.8 mmol/L) in spontaneous bacterial peritonitis but frequently fall below this level in secondary bacterial peritonitis. Pericardial: Pericardial fluid glucose to serum glucose ratios may be useful in identifying bacterial infection. Fluid to serum ratios <1.0 are seen in bacterial infection and tuberculous.	Asitic fluid chemical analysis before, during and after spontaneous bacterial peritonitis. Runyon BA, Hoefs JC Hepatology. 1985;5(2):257 Ben-Horin S, Shinfeld A, Kachel E, et al. The composition of normal pericardial fluid and its implications for diagnosing pericardial effusions. Am J Med 2005;118:636-40. Meyers DG, Meyers RE, Prendergast TW.
<b>Glutaraldehyde-Urine Adulteration Screen</b>	Tox	ng/mL	none detected	SAMSHA
<b>Gram Stain for Neisseria gonorrhoeae</b>	Microbiology	N/A	Negative	N/A
<b>Gram Stain Smear</b>	Microbiology	N/A	Negative	N/A
<b>Group A Strep A DNA Assay</b>	Microbiology	N/A	Negative	N/A
<b>Group B Streptococcus by PCR with Reflex to MIC</b>	Microbiology	Positive / Negative	Negative	Validation
<b>Group B Streptococcus Testing by PCR</b>	Microbiology	Positive/Negative	Negative	Validation
<b>Growth Hormone</b>	Special Functions	ng/mL	Female: <8.0 ng/mL Male: <3.0 ng/mL	Package insert, Operators manual, Textbook
<b>H. pylori Breath Test</b>	Microbiology	uh/min	Cut-off value is 2.4 for adults and 10.0 for children 3-17 years	Package Insert
<b>Haptoglobin</b>	CCL (moved from SF 4/29/15)	mg/dL	44-215	Package Insert
<b>Haptoglobin / LDH / Plasma Free Hemoglobin</b>	Special Functions	mg/dL	<30 mg/dL	Operators Manual
<b>HBsAg Neutralization*</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert.
<b>HCG Tumor Marker</b>	CCL, RRL, James	mIU/mL	Non-pregnant: <10 Postmenopausal: <10 2-4 Weeks: 39.1-8,388 5-6 Weeks: 861-88,769 8-10 Weeks: 18,700-244,467 10-12 Weeks: 23,143-181,899 13-27 Weeks: 6,303-97,171 28-40 Weeks: 4,360-74,833	Advia Centaur Assay Manual, Total HCG 10634917_EN Rev. F, 2011-04
<b>HCG, Quantitative (new testing method on 4/7/2015)</b>	Special Functions	IU/mL	Normal Range is based off the calculated MoM. Screen pos/ Screen Neg.	Package insert, Operators manual, Textbooks.
<b>HDL</b>	CCL, RRL, MMMP, SSCBC	mg/dL	20+ years >40	NCEP Guidelines
<b>Heckstick Evaluation</b>	Blood Bank	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	NA
<b>Helicobacter Pylori</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert
<b>Hematoctrit (HCT)</b>	CCL, RRL, James, MMMP, SSCBC	%	>18years: Male: 39.0-49.0 Female: 35.0-45.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Hematoctrit (Hct) - Blood Gas</b>	CCL and RT	%	>18years: Male: 39.0-49.0 Female: 35.0-45.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Hemoglobin (Hb) - Blood Gas</b>	CCL and RT	g/dL	>18years: Male: 13.2-17.3 Female: 11.7-15.5	Clinical Guide to Laboratory Tests, Tietz, 1995 (LH range)
<b>Hemoglobin (HGB)</b>	CCL, RRL, James, MMMP, SSCBC	g/dL	>18years: Male: 13.2-17.3 Female: 11.7-15.5	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Hemoglobin A1C</b>	Special Functions	%	4.7-5.6	Textbook
<b>Hemoglobin A1C Non Human*</b>	Special Functions	%	N/A	N/A
<b>Hemoglobin A1C-Reflex*</b>	Special Functions	%	4.7-5.6	Textbook
<b>Hemoglobin A2 Quant</b>	Special Functions	%	2.1-3.3	Package Insert, Textbook
<b>Hemoglobin F Quant</b>	Special Functions	%	<1.0	Package Insert, Textbook
<b>Hemoglobins</b>	Special Functions	%	Hemoglobin A: greater than 95%; Hemoglobin A2: 2.1 - 3.3%; Hemoglobin F: less than <1.0%; Hemoglobin C: 0%; Hemoglobin S: 0%	Package Insert, Textbook
<b>Hemosiderin, urine</b>	CCL	N/A	Negative	Wet Urinalysis by Schumm GB, 2003 pages 49-5:57
<b>Hep A Ab, (IgG+IgM)</b>	Special Functions	Pos/ Neg	Negative is Normal	Technical Document
<b>Hep B Core Ab, Total</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert, Technical document Textbooks.
<b>Hep B Core IgM Ab</b>	Special Functions	Pos/ Neg	Negative is Normal	Package insert, Textbooks
<b>Hep B Surface Ab</b>	Special Functions	Pos/ Neg	Negative is Normal	Technical Document
<b>Hep B Surface Ag</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert.
<b>Heparin PF4 IgG (HIT Screen)</b>	CCL	O.D., % Heparin Inhibition	<0.400 O.D. < 50% Inhibition	Immucor LIFECODES® PF4 IgG Assay Package Insert
<b>Heparin, Low Molecular Weight</b>	CCL	IU/mL	0.60-1.00 (Therapeutic Range)	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.
<b>Heparin, Unfractionated</b>	CCL	units/mL	0.30-0.70 (Therapeutic Range)	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.
<b>Heparin, Unfractionated</b>	CCL	units/mL	0.30-0.70 (Therapeutic Range)	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.
<b>Hepatitis A IgM Ab</b>	Special Functions	Pos/ Neg	Negative is Normal	Technical Bulletin
<b>Hepatitis B Virus Testing by PCR, quantitative</b>	MOLECULAR MICRO	IU/mL and log units	<10 IU/mL (<1.00 log unit)	Validation/Package Insert
<b>Hepatitis Be Antibody</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert
<b>Hepatitis Be Antigen</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert
<b>Hepatitis C Antibody</b>	Special Functions	Pos/ Neg	Negative is Normal	Package Insert.
<b>Hepatitis C Virus Genotyping with Amplification</b>	MOLECULAR MICRO	N/A	N/A	Validation
<b>Hepatitis C Virus Testing by PCR, quantitative</b>	MOLECULAR MICRO	IU/mL and log units	<12 IU/mL (1.08 log units)	Validation/Package Insert
<b>Herpes Simplex Virus 1 AND 2 Testing BY PCR</b>	MOLECULAR MICRO	Positive / Negative	Negative	Validation
<b>HIV 1/2 Supplemental Assay</b>	Special Functions	Pos / Neg	Negative	Package insert
<b>HIV by PCR, quantitative</b>	MOLECULAR MICRO	copies/mL and log units	<40 copies/mL (<1.60 log units)	Validation/Package Insert
<b>HIV, RNA1/2 Ar/ Combo with p24 Ar</b>	CCL / RRL	N/A	All nonreactive	Package Insert
<b>HIV-1/HIV-2 Antibody with HIV-1 p24 Antigen</b>	Special Functions	REAC/ NRAT	NRAT is normal	Package insert
<b>Homocysteine</b>	CCL	umol/L	All 3.7-13.9	Advia Centaur Assay Manual, HCY 124489 Rev. G, 2008-10
<b>HPV, High Risk, DNA</b>	Special Functions	Pos/ Neg	Normal is Negative	Package Insert
<b>HSV I&amp;II IgG Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Textbooks, HSV-1&2 IgG procedure, Package Insert
<b>HSV I/II IgM Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Textbooks, HSV-1&2 IgG procedure, Package Insert
<b>IgE, Total</b>	Special Functions	IU/mL	1.3-165.3	Package Insert
<b>IGT</b>	Special Functions	ng/mL	110-350 ng/mL	Package insert
<b>Immunofluorescence, Urine</b>	Special Functions	N/A	N/A	Package Insert
<b>Immunoglobulin A (IgA)</b>	CCL	mg/dL	Adult 18-60Y: 66-433 (updated on 10/1/2014)	OSUWMC Immunoglobulin Reference Range Study
<b>Immunoglobulin G (IgG)</b>	CCL	mg/dL	Adult 18-60Y: 600-1714 (updated on 10/1/2014)	OSUWMC Immunoglobulin Reference Range Study
<b>Immunoglobulin M (IgM)</b>	CCL	mg/dL	Adult 18-60Y: 45-281 (updated on 10/1/2014)	OSUWMC Immunoglobulin Reference Range Study
<b>Influenza A and B, Respiratory Syncytial Virus Testing by PCR</b>	Microbiology	Not Detected/ Detected	Not Detected	Validation
<b>Influenza B Testing by PCR</b>	MOLECULAR MICRO	Not Detected/ Detected	Not detected	Validation
<b>Inhibin A (new testing method 4/7/2015)</b>	Special Functions	pg/mL	Normal Range is based off the calculated MoM. Screen pos/ Screen Neg.	Package insert
<b>INR</b>	CCL, RRL, James, MMMP, SSCBC	(ratio)	0.9-1.1 Oral Anticoagulant Therapy Target Ranges: Standard Therapy 2.0-3.0, High Dose 2.5-3.5	OSUWMC, in house reference range study performed yearly
<b>Insulin</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tol 10</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tol 2 m</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tolerance 1 minute</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tolerance 5 minute</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tolerance Test 30 minutes</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin / Glucose Tolerance zero</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Insulin Tol Zero min</b>	Special Functions	uIU/mL	0.29-1.01 uIU/mL	OSU established
<b>Intact parathyroid hormone</b>	Special Functions, UHE	pg/mL	14-72 pg/mL	Package insert, Assay manual
<b>Intact PTH (Intraoperative PTH)</b>	Special Functions, UHE	pg/mL	14-72 pg/mL	Package insert, Assay manual
<b>Ionized Calcium (Ca<sup>2+</sup>) - Blood Gas</b>	CCL, RT, MMMP	mg/dL	4.60-5.30	Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 2006
<b>IRON</b>	CCL	mcg/dL	19+ years 40-174	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
<b>Iron Binding</b>	CCL	mcg/dL	19+ years 298-596	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
<b>JO-1 Antibody</b>	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
<b>Kappa Free Light Cha</b>	Special Functions	mg/L	Serum: 3.3-19.4 mg/L, Kappa/Lambda Ratio 0.26-1.65	Textbook, User Manual, Package Insert
<b>Kappa/Lambda ratio</b>	Special Functions	mg/L	Serum: 3.3-19.4 mg/L, Kappa/Lambda Ratio 0.26-1.65	Textbook, User Manual, Package Insert
<b>Kleihauer -Betke</b>	Blood Bank	N/A	The percent of fetal hemoglobin containing red blood cells	NA
<b>Lactate - Blood Gas</b>	CCL	mmol/L	Adult 0.5 - 1.6	ABL 800 Flex Reference Manual

Analyte	Lab(s)	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website. <a href="https://clinicallabs.osumc.edu">https://clinicallabs.osumc.edu</a></b>				
Lactate CSF	CCL	mmol/L	Adult <2.8	Beckman Coulter literature which cites Clinical Guide to Laboratory Tests, Tietz, 1995
Lactate Dehydrogenase (LD)	CCL, RRL James, MMMP, SSCBC	U/L	19+ years 100-190	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soddin, 1999
Lactate, Fluid	CCL	mmol/L	Pleural fluid lactate may be elevated in bacterial empyemas or other conditions such as rheumatoid arthritis	Diagnostic: significance of pleural fluid lactate concentrations Pettersson T, Ojala K, Weber TH. Infection. 1985 Nov-Dec;13(6):257-9.
Lactate, Plasma	RRL, MMMP	mmol/L	All 0.5-2.2	Beckman Coulter Literature (IFU) which cites, Tietz, N. W., Clinical Guide to Laboratory Tests, 3rd Edition, W. B. Saunders, Philadelphia, PA (1995).
Lactoferrin	Microbiology	N/A	Negative	Package Insert
Lambda Free Light Ch	Special Functions	mg/L	Serum: 5.71-26.30 mg/L. Kappa Lambda Ratio: 0.26-1.65	Textbook, User Manual, Package Insert
LD, Fluid	CCL, RRL	U/L	Contamination with red blood cells can falsely increase LDH measurements. Elevated LDH in CSF specimens may indicate a non-specific immune process. CSF LDH measurements above 40 U/L may be associated with Jakob-Creutzfeldt Disease, Bacterial meningitis, Neurosyphilis, or tumors of the central nervous system. A fluid LDH/Serum LDH ratio greater than 0.6 or a fluid LDH value two-thirds the upper limit of the serum LDH reference interval suggest an exudate.	Clinical Utility of Biochemical Analysis of Cerebrospinal Fluid Clinica Chemistry 1995 Watson MA The usefulness of diagnostic tests on pericardial fluid. Chest 1997;111:1213-21. Pleural effusions: the diagnostic separation of transudates and exudates. Light RW, Macgregor ML, Luchsinger PC, Ball WC Jr Am Intern Med. 1972;77(4):507.
Legionella Culture	Microbiology	NA	Collect Time is required for each specimen submission.	N/A
Legionella Urinary A	Special Functions	Pos/ Neg	Negative is Normal	Package Insert
Lewis Antigen Typing	Blood Bank	N/A	Positive or Negative	N/A
Lidocaine	Tox	mcg/mL	Therapeutic: 1.5 - 5	OSI Pharmacy
Lipase	CCL, RRL, James, MMMP	U/L	19+ years 11-82	Beckman Coulter Chemistry Information Sheet, 12/1998; Pediatric Reference Ranges, 1999
Lipase, Fluid	CCL	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
Lipid Screen	CCL	Varies	Varies	N/A
Lithium	CCL, RRL	mmol/L	All 0.6-1.2;	LiApplied Clinical Pharmacokinetics, Bauer, 2001; Clinical Pharmacokinetics, Eilers, 1995:29-44:2-50
Liver-Kidney Microsomal	Special Functions	Pos/ Neg	Negative is Normal	Package Insert
Low-Density Lipoprotein Cholesterol (LDL)- calculated	CCL, RRL, MMMP, SSCBC	mg/dL	Adult optimal: <100	NCEP Guidelines
Low-Density Lipoprotein Cholesterol (LDL)- direct measure	CCL	mg/dL	Adult optimal: <100	NCEP Guidelines
Lupus Anticoagulant Workup	CCL	N/A	N/A	N/A
Luteinizing Hormone (LH)	CCL	mIU/mL	Male 20-70 years 1.5-9.3 Male >70 years 3.1-4.6 Children <0.1-6.0 Female, follicular phase: 1.9-12.5 Female, mid cycle: 8.7-76.3 Female, luteal: 0.5-16.9 Female, pregnant: <0.1-1.5 Female, post-menopausal: 15.9-54.0 Female on Contraceptives: 0.7-5.6	Advia Centaur Assay Manual, LH 111736 Rev. L, 2008-09-Pediatric Reference Ranges, Soddin, 1999
Lyme Antibody	Special Functions	Pos/ Neg	Negative is Normal	Package Insert
Lymphocytes, %	CCL, RRL James, MMMP, SSCBC	%	22.0-44.0	Clinical Guide to Laboratory Tests, Tietz, 1995
Lymphocytes, Absolute	CCL, RRL James, MMMP, SSCBC	x10 <sup>9</sup> /uL or K/uL	1.0-4.8	Clinical Guide to Laboratory Tests, Tietz, 1995
Lymphoma %	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
Lymphoma Cells %	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
M. Tuberculosis by Quantiferon	Special Functions	IU/mL	Negative is Normal	Package insert, operators manual.
Macroscopic Arthropod Examination	Microbiology	N/A	Method: examination of bug under low magnification to determine if it is a human ectoparasite, and if so, its identification.	N/A
Macroscopic Parasitology Examination	Microbiology	N/A	Reference Interval: parasite exam negative	N/A
Magnesium (Mg)	CCL, RRL James, MMMP, SSCBC	mg/dL	19+ years 1.6-2.6	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soddin, 1999
Magnesium, urine (24 hours)	CCL	mg/24hrs	24 hour samples: 72.9-121.5	Clinical Guide to Laboratory Tests, Tietz, 1995
Magnesium, urine (Random)	CCL, RRL	mg/dL	Not established	N/A
Malb/Creatinine Ratio, Urine	CCL	mg Malb/yg Creatinine	<30	Package Insert
Manual Retic	CCL	%	>18years: 0.5-1.5	Clinical Guide to Laboratory Tests, Tietz, 1995
Maternal Alpha Fetal Protein	Special Functions	ng/mL	Normal Range is based off the calculated MoM. Screen pos / screen neg	Package insert, Textbook
Mean Cell Hemoglobin (MCH)	CCL, RRL James, MMMP, SSCBC	pg	>18years: 27.0-34.0	Clinical Guide to Laboratory Tests, Tietz, 1995
Mean Cell Hemoglobin Conc. (MCHC)	CCL, RRL James, MMMP, SSCBC	g/dL	>18years: 32.0-36.0	OSU Internal Normal Range Study, July 2003 and Clinical Guide to Laboratory Tests, Tietz, 1995
Mean Cell Volume (MCV)	CCL, RRL James, MMMP, SSCBC	fL	>18years: Male: 80.0-99.0 Female: 81.0 - 100.00	Clinical Guide to Laboratory Tests, Tietz, 1995
Mean Platelet Volume (MPV)	CCL, RRL James, MMMP, SSCBC	fL	>18years: 7.5-11.2	Beckman Coulter Reference Range Study, online help file, 2003
Measles Rubella Immunology	Special Functions	Pos/ Neg	<b>Negative</b> -The absence of detectable IgG-class antibodies to measles, mumps, rubella, VZV suggest no prior exposure to these viruses or the lack of a specific immune response to immunization. Indeterminate- <b>RESULT INDETERMINATE: RECOMMEND THAT TEST BE REPEATED.</b> Submit an additional sample for resting in 10 to 14 days to demonstrate IgG seroconversion if recently vaccinated or if otherwise clinically indicated. <b>Positive</b> - The presence of detectable IgG-class antibodies to these viruses indicates prior exposure through infection or immunization. Individuals testing positive for IgG-class antibodies to measles, mumps, rubella, or VZV are considered immune.	BioPlex2200 MMRV IgG Procedure March 2010
metamyelocyte %	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
Methadone confirmation - urine	Tox	pos/neg	none detected	NA
Methadone screen - urine	Tox, UHE	pos/neg	none detected	NA
Methemoglobin (MetHb) - Blood Gas	CCL	%	Adult 0-1.5%	ABL 800 Flex Reference Manual
Methicillin Resistant Staph aureus Screen, Nares	Microbiology	N/A	Negative for MRSA	N/A
Methicillin Resistant Staph aureus Screen, Nursery	Microbiology	N/A	Negative	N/A
Methotrexate	Tox	ng/mL	Due to different protocols using this drug, contact the primary attending physician	OSU Pharmacy
Microalbumin	CCL	mg/L	N/A	Package Insert
Microalbumin (24 Hours)	CCL	mg/24 hours	<30	Package
Microalbumin/Creatinine Ratio, Urine (Random)	CCL	mg Microalbumin/yg Creatinine	<30	Package insert
Modified Acid Fast Procedure for Cryptosporidium	Microbiology	N/A	negative	N/A
Mold Identification	Microbiology	NA	NA	N/A
Molecular enteric Panel	Microbiology	N/A	Negative	N/A
Monoclonal Light Chain, Quantitative, Urines	Special Functions	N/A	Negative is Normal	Package Insert
Monocytes, %	CCL, RRL James, MMMP, SSCBC	%	0.0-7.0	Clinical Guide to Laboratory Tests, Tietz, 1995
Monocytes, Absolute	CCL, RRL James, MMMP, SSCBC	x10 <sup>9</sup> /uL or K/uL	0.0-0.8	Clinical Guide to Laboratory Tests, Tietz, 1995
Monospot	CCL, RRL	Qualitative	All Negative	Sure-View Color Mono package insert
MRSA / MSSA Screen by PCR	Microbiology	N/A	Not Detected	Package Insert
Multimer Analysis	BRL	Bands	Normal / Abnormal	Normal Range Study
Mumps Ab, IgG	Special Functions	Pos/ Neg	<b>Negative</b> -The absence of detectable IgG-class antibodies to measles, mumps, rubella, VZV suggest no prior exposure to these viruses or the lack of a specific immune response to immunization. Indeterminate- <b>RESULT INDETERMINATE: RECOMMEND THAT TEST BE REPEATED.</b> Submit an additional sample for resting in 10 to 14 days to demonstrate IgG seroconversion if recently vaccinated or if otherwise clinically indicated. <b>Positive</b> - The presence of detectable IgG-class antibodies to these viruses indicates prior exposure through infection or immunization. Individuals testing positive for IgG-class antibodies to measles, mumps, rubella, or VZV are considered immune.	BioPlex2200 MMRV IgG Procedure March 2010
Mycobacterium Identification	Microbiology	NA	NA	N/A
Mycobacterium tuberculosis complex Testing by PCR	Microbiology	TB Not Detected/TB Detected	No M. tuberculosis complex DNA detected	Department
Mycobacte %	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
Mycoperoxidase Antibody	Special Functions	Pos/ Neg	Negative is Normal	Instructions for use manual
Nisseria gonorrhoeae Identification	Microbiology	NA	NA	N/A
Nisseria gonorrhoeae NAAT testing	Microbiology	RLU (Relative Light Units)	Negative	Validation
Nisseria gonorrhoeae Screen	Microbiology	N/A	Negative	N/A
Neonatal RPR	Special Functions	Pos/ Neg	Negative is Normal	ASI RPR package insert 6/10

Analyte	Lab(s)	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website. <a href="https://clinicallabs.osumc.edu">https://clinicallabs.osumc.edu</a></b>				
<b>Neurotensin</b>	Special Functions	pg/mL	Less than 100	OSU validated Range
<b>Neutrophils - Bands Absolute</b>	CCL, RRL James, MMMP, SSCBC	K/uL	1.8-8.4	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Neutrophils, %</b>	CCL, RRL James, MMMP, SSCBC	%	40-70.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Neutrophils, Absolute</b>	CCL, RRL James, MMMP, SSCBC	x10 <sup>3</sup> /uL or K/uL	1.8-7.7	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Nicotine, (Cotinine)-urine</b>	Tox	pos/neg	none detected	NA
<b>O2Sat - Blood Gas</b>	CCL, RT, MMMP	%	94-98; newborn: 40-90	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Occult Blood, Gastric</b>	OCCL	N/A	Negative	N/A
<b>Occult Blood, Stool</b>	CCL, UHE	N/A	Negative	N/A
<b>Opiate Compliance (Drug Compliance Panel)</b>	Tox	pos/neg	NA	NA
<b>Opiate confirmation - urine</b>	Tox	pos/neg	none detected	NA
<b>Opiate confirmation - urine forensic 6-acetylmorphine quantitation</b>	Tox	ng/mL	none detected	NA
<b>Opiate screen - urine</b>	Tox, UHE	pos/neg	none detected	NA
<b>Osmolality, Urine</b>	CCL	mOsm/kg	All 300-900	Clinical Guidelines for Laboratory Tests, Tietz, 1995
<b>Osmolality, Fluid</b>	CCL	N/A	All NA	N/A
<b>Osmolality, Serum</b>	CCL	mOsm/kg	1+ year 278-305	Clinical Guidelines for Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soddin, 1999
<b>Other, %</b>	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Ova and Parasite Screen</b>	Microbiology	N/A	Negative	N/A
<b>Oxidants-Urine Adulteration Screen</b>	Tox	pos/neg	none detected	SAMSHA
<b>Oxycodone screen-urine</b>	Tox, UHE	pos/neg	none detected	NA
<b>Pancrastatin</b>	Special Functions	pg/mL	Less than 135	OSU validated Range
<b>Pancreatic Function Test (Timed)</b>	CCL	N/A	Measurement of secretin stimulated electrolytes and enzymes in pancreatic fluid may correlate with the degree of pancreas function. Peak bicarbonate values >75 mmol/L for screening (time 15 minutes) and >80 mmol/L for confirmatory (time 60 minutes) tests suggest normal pancreas function.	N/A
<b>Pancreatic Polypeptide</b>	Special Functions	pg/mL	Less than 500	OSU validated Range
<b>Parasite Screen / ID Blood</b>	CCL	N/A	No plasmodium organisms seen	N/A
<b>Parietal Cell Antibody</b>	Special Functions	Pos/ Neg	Negative is Normal	Textbook
<b>pCO2 - Blood Gas</b>	CCL, RT, MMMP	mmHg	Arterial: >31days: 32-48 / Venous: 46.1-71.1	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respirology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Epub 2014 Jan 3.
<b>PCP Confirmation - forensic urine quantitation</b>	Tox	ng/mL	none detected	NA
<b>PCP Confirmation - urine</b>	Tox	pos/neg	none detected	NA
<b>PCP screen - urine</b>	Tox, UHE	pos/neg	none detected	NA
<b>Pentobarbital</b>	Tox	ug/mL	Intracranial pressure therapy: 30 - 40	OSU Pharmacy
<b>Peripheral Smear for Pick-up by Physician for Review</b>	CCL, RRL James, MMMP, SSCBC	N/A	N/A	N/A
<b>pH - Blood Gas</b>	CCL, RT, MMMP	pH	Arterial: >31days: 7.35-7.45 / venous: 7.32-7.42	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respirology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Epub 2014 Jan 3.
<b>Phenobarbital</b>	CCL	mcg/mL	All 15.0-40.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001
<b>Phenytoin (Total)</b>	CCL, RRL	mcg/mL	All 10.0-20.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001
<b>Phenytoin, Free</b>	Tox	mcg/mL	0.6 - 2.4	OSU Pharmacy
<b>Phosphorus</b>	CCL, RRL James, MMMP, SSCBC	mg/dL	19+ years 2.2-4.6	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soddin, 1999
<b>Phosphorus, Fluid</b>	CCL	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Phosphorus, urine (24 hours)</b>	CCL	g/24hrs	0.4-1.3	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Phosphorus, urine (Random)</b>	CCL	mg/dL	None established	N/A
<b>pH-Urine Adulteration Screen</b>	Tox	NA	4.5-9	SAMSHA
<b>Pinworm Examination</b>	Microbiology	N/A	negative	Validation
<b>Plasma Cells %</b>	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Plasma Cells %</b>	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Platelet Aggregation</b>	CCL	N/A	normal aggregation	N/A
<b>Platelet Count (PLT)</b>	CCL, RRL James, MMMP, SSCBC	x10 <sup>3</sup> /uL or K/uL	>18years: 150-400	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Platelet Function Screening Test</b>	CCL	Seconds	Collagen / Epinephrine 73-172 and Collagen / ADP 53-111	OSU Normal Range Study 07/2004
<b>Platelet P2Y12 Inhibition Test</b>	CCL	PRU	194 - 418	Accumetrics, verified at OSU
<b>pO2 - Blood Gas</b>	CCL, RT, MMMP	mmHg	Arterial: 83-108 / Venous: 36.1-52.1	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respirology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Epub 2014 Jan 3.
<b>Potassium (K)</b>	CCL, RRL James, MMMP, SSCBC	mmol/L	18+ years 3.5-5.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soddin, 1999
<b>Potassium (K') - Blood Gas</b>	CCL	mmol/L	18+ years 3.5-5.0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Potassium, Fluid</b>	CCL	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
<b>Potassium, urine (24 hours)</b>	CCL	mmol/24hrs	25-125	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Potassium, urine (Random)</b>	CCL, RRL	mmol/L	None established	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Prealbumin</b>	CCL (moved from SF 4/29/15)	mg/dL	17-34	Package Insert
<b>Procalcitonin</b>	CCL, RRL	ng/mL	All 0.00-0.50	bioMerieux Mini vidias package insert, VIDAS® B-R-A-H-M-S PCT 13975 B - en - 2010/09
<b>Progesterone</b>	CCL	ng/mL	Male 0.28-1.22 Female, follicular 0.15-1.40 Female, luteal: 3.34-25.56 Female, mid-luteal: 4.44-28.03 Female, post-menopausal: Not detected-0.73	Advia Centaur Assay Manual, Progesterone 118696 Rev. P, 2010-06
<b>Prolactin</b>	CCL	ng/mL	Males: 2.1-17.7 Female: nonpregnant: 2.8-29.2 Pregnant: 9.7-208.5 20.3 <2 years: 3.3-14.7 2-5 years: 1.0-12.8 6-10 years: 1.2-11.4 11-17 years: 1.4-14.3	Advia Centaur Assay Manual, Prolactin 111746 Rev. N, 2008-09; Pediatric Reference Intervals, 5th ed Soddin, 2005
<b>Prolymphocytes %</b>	CCL, RRL James, MMMP, SSCBC	%	0	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Promyelocyte %</b>	CCL, RRL James, MMMP, SSCBC	%	0	OSU Internal Normal Range Study, 2008 and Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Propoxyphene confirmation - urine</b>	Tox	pos/neg	none detected	NA
<b>Propoxyphene screen - urine</b>	Tox, UHE	pos/neg	none detected	NA
<b>Protein C</b>	CCL	% Activity	17+ years: 72-220	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol. Vol 12, 95-104, Andrew, 1990
<b>Protein Electrophoresis</b>	Special Functions	% g/dL	Albumin: 53.0-66.7%, 3.7-4.9 g/dL - Alpha 1: 3.0-5.8%, 0.2-0.4 g/dL - Alpha 2: 27.6-15.5%, 0.5-1.0 g/dL - Beta: 7.9-13.4%; 0.5-1.1 g/dL - Gamma: 8.8-19.2%; 0.6-1.5 g/dL	Package Insert
<b>Protein S</b>	CCL	% Activity	17+ years: 50-168	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol. Vol 12, 95-104, Andrew, 1990
<b>Proteinase 3 Antibody</b>	Special Functions	Pos/ Neg	Negative is Normal	Instructions for use manual
<b>PSA</b>	CCL, RRL James	ng/mL	All <4.0	Advia Centaur Assay Manual, PSA 119746 Rev. N, 2009-11
<b>PT</b>	CCL, RRL James, MMMP, SSCBC	seconds	11.7-14.5	OSUWMC, in house reference range study performed yearly
<b>PT Blood Culture</b>	Microbiology	N/A	No growth	N/A
<b>PT Mixing Study</b>	CCL	seconds	N/A	N/A
<b>PTT</b>	CCL, RRL James, MMMP, SSCBC	seconds	24-34 Heparin Therapeutic Range: (HTR) 71-99 sec	OSUWMC, in house reference range study performed yearly
<b>PTT Mixing Study</b>	CCL	seconds	N/A	N/A
<b>PTT-LA (for Lupus Testing only)</b>	CCL	seconds	31.2 - 44.2	OSUWMC, in house reference range study performed yearly
<b>Quant RPR</b>	Special Functions	N/A	Negative is Normal	ASI RPR package insert 6/10
<b>Quantitative Tissue Culture</b>	Microbiology	colony forming units/mL	No growth	N/A
<b>Rapid Beta Streptococcus Group A Antigen Test</b>	CCL	N/A	Negative	Sure-Vue package insert 1/18/07
<b>Rapid HIV</b>	CCL, RRL	Qualitative	All Non-reactive	Clearview HIV 1/2 Package Insert 05904.05
<b>Rapid HIV (new kit 12/2014)</b>	CCL, RRL	N/A	All nonreactive	package insert
<b>Rapid Influenza A/B Molecular</b>	CCL, RRL	Detected / Not detected / indeterminate	Not Detected	Alere-1 Influenza A+B package insert
<b>RBC CAST</b>	CCL, UHE, James, MMMP, SSCBC	per hpf	negative	Urinalysis and Body Fluid, Rimsgrul 1995
<b>Red Blood Cell Count (RBC)</b>	CCL, RRL James, MMMP, SSCBC	x10 <sup>3</sup> /uL or M/uL	>18years: Male: 4.3-5.7 / Female 3.8 -5.1	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Red Cell Distribution Width (RDW)</b>	CCL, RRL James, MMMP, SSCBC	%	>18years: 11.6-14.8	Clinical Guide to Laboratory Tests, Tietz, 1995
<b>Renin Activity</b>	Special Functions	ng/mL/hr	Supine: 0.15-2.33 Upright: 1.31-3.95	Kit Range
<b>Renin, Direct</b>	Special Functions	pg/mL	Upright: <41 4.2-52.2 >40: 3.6-81.6 Supine: <41: 3.2-33.2 >40: 2.4-45.1	package insert
<b>Respiratory Beta Streptococcus Screen, Throat</b>	Microbiology	N/A	Negative	N/A
<b>Respiratory Culture</b>	Microbiology	N/A	normal flora	N/A
<b>Respiratory II, Throat Culture</b>	Microbiology	N/A	normal flora	N/A
<b>Respiratory Virus Panel Testing by PCR</b>	Microbiology	Not Detected / Positive	Not Detected	Validation

Analyte	Lab(s)	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website. <a href="https://clinicallabs.osumc.edu">https://clinicallabs.osumc.edu</a></b>				
Reticulocyte Count (RET), %	CCL, James	%	>18years: 0.5-1.5	Clinical Guide to Laboratory Tests, Tietz, 1995
Reticulocyte Count (RET), Absolute	CCL, James	x10 <sup>6</sup> /uL or M/uL	>18years: 0.024-0.084	Clinical Guide to Laboratory Tests, Tietz, 1995
Rheumatoid Factor	CCL (moved from SF 4/29/15)	IU/mL	0-14	Package Insert verified by OSU Study
Rhagum Evaluation	Blood Bank	N/A	NA	NA
RNP Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
Rolypzol	Tox	pos/neg	none detected	NA
Routine Culture and Smear	Microbiology	N/A	No growth	Validation
RPR w/reflex titer*	Special Functions	Pos/ Neg	Negative is Normal	ASI RPR package insert 6/10
RPR, Therapy *	Special Functions	Pos/ Neg	Negative is Normal	ASI RPR package insert 6/10
Rubella Immune Status	Special Functions	Pos/ Neg	<b>Negative</b> -The absence of detectable IgG-class antibodies to measles, mumps, rubella, VZV suggest no prior exposure to these viruses or the lack of a specific immune response to immunization. Indeterminate- <b>RESULT INDETERMINATE; RECOMMEND THAT TEST BE REPEATED.</b> Submit an additional sample for resting in 10 to 14 days to demonstrate IgG seroconversion if recently vaccinated or if otherwise clinically indicated. <b>Positive</b> - The presence of detectable IgG-class antibodies to these viruses indicates prior exposure through infection or immunization. Individuals testing positive for IgG-class antibodies to measles, mumps, rubella, or VZV are considered immune.	BioPlex2200 MMRV IgG Procedure March 2010
Salicylate	RRL, James	mg/dL	All 20.0-30.0	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002 Applied Therapeutics, Inc. and Micromedex On OSU Intranet.
Sc70 Antibody	Special Functions	Pos/ Neg	Negative is Normal	Package insert, textbook
Serous Fluid RBC	CCL, RRL	/uL	N/A	Body Fluids 3rd ed. Kjeldsberg, Knight 1993, Coulter LH Workstation BF Application, Issue B, 11/06
Serous Fluid WBC	CCL, RRL	/uL	N/A	Body Fluids 3rd ed. Kjeldsberg, Knight 1993, Coulter LH Workstation BF Application, Issue B, 11/06
Serum ETOH	RRL, James	mg/dL	<10	Synchron CX Systems Chem. Info. Manual, 1995
Serum Immunofixation	Special Functions	N/A	N/A	Package Insert
Serum Monoclonal Protein	Special Functions	N/A	Negative is Normal	Package Insert
Sex Hormone Binding Globulin	Special Functions	nmol/L	Male: 10-57 / Female (nonpregnant): 18-144	Package insert
Shiga Toxin E. Coli	Microbiology	N/A	Negative	NA
Sickle High Solubility	Special Functions	Pos/ Neg	Normal is Negative	Package Insert, Textbook
Siroimus	Tox	mg/mL	Bone Marrow Transplant: 4-12	OSU Pharmacy
Sm/RNP Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
Smith Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
Smooth Muscle Antibody	Special Functions	Pos/ Neg	Normal is Negative	Textbook
Sodium (NA)	CCL, RRL, James, MMMP, SSCBC	mmol/L	1+ years 133-143	Internal study, 2012 (see file); Pediatric Reference Ranges, Soldin, 1999
Sodium (Na <sup>+</sup> ) - Blood Gas	CCL	mmol/L	1+ years: 133-143	Internal study, 2012 (see file); Pediatric Reference Ranges, Soldin, 1999
Sodium, Fluid	CCL	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
Sodium, urine (Random)	CCL, RRL	mmol/L	None established	N/A
Sodium, urine (24 hours)	CCL	mmol/24hrs	24 hour samples: 40-220	Clinical Guide to Laboratory Tests, Tietz, 1995
Specific gravity-Urine Adulteration Screen	Tox	nD	1.003-1.030	SAMSHA
Sperm pH	SSCBC	N/A	>7.0 Refer to Mayo	WHO laboratory manual for the Examination and Processing of Human Semen, 5th Ed
SSA Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
SSB Antibody	Special Functions	Pos/ Neg	Normal is Negative	Package insert, textbook
Staphylococcus Screen, Research Only	Microbiology	N/A	Negative for MRSA. Collect Time is required for each specimen submission.	N/A
Sterility Check	Microbiology	NA	Negative	NA
Stool Culture	Microbiology	N/A	Emphasis is on isolating Salmonella, Shigella, Yersinia, and Campylobacter. All unformed, liquid or bloody stools are also tested for E. coli 0:157 by culture and Shiga-like toxin enzyme immunoassay. Collect Time is required for each specimen submissions.	N/A
Stool Screen for Aeromonas / Pleisiomonas	Microbiology	N/A	Negative	N/A
Streptococcus pneumoniae Urine Antigen Test	Microbiology	All	Negative	Bimax NOW Package Insert
Substance P (Discontinued 5/12/16)	Special Functions	pg/mL	Less than 240	OSU validated Range
Susceptibility Testing	Microbiology	N/A	N/A	N/A
Syphilis IgG AB with Reflex RPR	Special Functions	Pos/ Neg	Normal is Negative	Package Insert, CDC
T Uptake	CCL	Bind Index	N/A	Advia Centaur Assay Manual, T10 10629911, EN Rev. H, 2011-03
T3	CCL	ng/mL	19+ years 0.60-1.81	Advia Centaur Assay Manual, T3 111634 Rev. L, 2008-09
T4	CCL	mcg/dL	19+ years 4.5-10.9	Advia Centaur Assay Manual, T4 111619 Rev. L, 2008-09-Pediatric Reference Ranges, Soldin, 1999
Tacrolimus	Tox	ng/mL	Therapeutic: 5-15 Bone Marrow Transplant: 4-12	OSU Pharmacy
Terminal Activation Pathway	BRL	ng/mL	C5a 19 - 48	Biomarker Ref. Lab
Terminal Activation Pathway	BRL	ng/mL	SC5b-9 24-248	Biomarker Ref. Lab
Testosterone	CCL	ng/dL	Male: 241-827, Female: 14-76	Advia Centaur Assay Manual, Testosterone, 11751 Rev. N, 2009-07
THC confirmation - blood quantification	Tox	ng/mL	none detected	NA
THC confirmation - urine	Tox	ng/mL	none detected	NA
THC screen - urine	Tox, UHE	pos/neg	none detected	NA
Theophylline	CCL	mcg/mL	Adult 10-20 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001
Thrombin Time (TT)	CCL	seconds	13.0-20.0	OSU Lab Normal Range Study
Thrombin Time Mixing Study (TT)	CCL	seconds	NA	NA
Thrombolytic	Special Functions	ng/mL	1.6 - 50.0 ng/mL	Package insert, Textbook
Thrombolytic Antibody	Special Functions	IU/mL	<4.0 IU/mL	Package insert, Textbook
Tobramycin (Peak)	CCL	mcg/mL	All 10.0-15.0 (Therapeutic Range)	Antimicrobial Stewardship Program, 2013
Tobramycin (Trough)	CCL	mcg/mL	All <1.0 (Therapeutic Range)	Antimicrobial Stewardship Program, 2013
Total Protein	CCL, RRL, James, MMMP, SSCBC	g/dL	19+ years 6.4-8.3	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
Total Protein, CSF (M-TP)	CCL, RRL	mg/dL	31 Days+ 15-45	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999
Total Protein, Fluid (M-TP)	CCL, RRL	mg/dL	Most transudates have total protein concentrations below 3.0 g/dL.	4th Edition of Teitz
Total Protein, urine (24 hours)	CCL, James, MMMP, SSCBC	mg/24hrs	24 hour : 40-225 Random: None established	Clinical Guide to Laboratory Tests, Tietz, 1995
Total Protein, urine (Random)	CCL, RRL, James, MMMP, SSCBC	mg/dL	None established	NA
Toxicology Screen, Serum	Tox	pos/neg	none detected	NA
Toxicology Screen, Urine	Tox	pos/neg	none detected	NA
Toxicology, Umbilical Cord Tissue	Tox	Present / absent	Negative	OSU Toxicology
Toxoplasma IgG Antibody	Special Functions	Pos/ Neg	Normal is Negative	Technical Document, Assay manual, Textbook
Toxoplasma IgM Antibody	Special Functions	Index value	Normal is Negative	Package insert, Assay manual, Textbook
Transferrin (TRAN)	CCL, SSCBC	mg/dL	200-400	Fundamentals of Clinical Chemistry, Tietz, 4th ed
Transfusion Reaction Evaluation	Blood Bank	N/A	Positive or Negative	Positive
Triglycerides (TG)	CCL, RRL, MMMP, SSCBC	mg/dL	Desirable <150 Borderline 150-199 High 200-499 Very High >500	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP-III) (Circulation, 2002;106:3143-3421)
Triglycerides, Fluid	CCL	mg/dL	Fluid triglyceride values greater than 110 mg/dL have been suggested for diagnosis of lymphatic fluid accumulation. Measurement may also be useful in distinguishing cirrhotic versus malignant origins.	The lipoprotein profile of chylous and nonchylous pleural effusions Staats BA, Ellefson RD, Budahn LL, Dines DE, Prakash UB, Offord K Mayo Clin Proc. 1980;55(11):700. Value of ascitic lipids in the differentiation between cirrhotic and malignant ascites. Jungst D, Gerbes AL, Martin R, Paumgartner G Hepatology. 1986;6(2):239.
Tropoin I	CCL, RRL, James	ng/mL	All: 0.00-0.10	Advia Centaur Assay Manual, Td 10629900, EN Rev. J, 2011-04; Normal Range study 2006
TSH reflexive (TSH / FT4)	CCL, RRL, James	uIU/mL	18+ years 0.550-4.780	Advia Centaur Assay Manual, TSH3-UL 10629909, EN Rev. E, 2011-07; Wu AHB Tietz Clinical Guide to Laboratory Tests, 4th edition, Elsevier-Saunders, St. Louis, 2006, p.1040.Range information
TSH ultra	CCL, RRL, James	uIU/mL	18+ years 0.550-4.780	Advia Centaur Assay Manual, TSH3-UL 10629909, EN Rev. E, 2011-07; Wu AHB Tietz Clinical Guide to Laboratory Tests, 4th edition, Elsevier-Saunders, St. Louis, 2006, p.1040.Range information

Analyte	Labs	Units	Reference Ranges	Source of Reference Range
<b>The most current laboratory reference ranges are included in the laboratory report from the LIS. Laboratory testing information is also available on the Laboratory Guide to Services Website. <a href="https://clinicallabs.osumc.edu">https://clinicallabs.osumc.edu</a></b>				
Type and Cross	Blood Bank	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	NA
Type and Screen	Blood Bank	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	NA
Unconjugated Estradiol	Special Functions	ng/mL	Normal Range is based off of the calculated MoM. Screen pos/ Screen neg.	Package insert, Operators manual
Urea Nitrogen, Fluid	CCL	mg/dL	Peritoneal: Peritoneal fluid urea nitrogen and creatinine levels that are greater than serum levels may imply intraperitoneal leakage of urine outside of the urinary tract. Normal reference intervals for peritoneal creatinine and urea are thought to be equivalent to those of serum.	Peritoneal fluid urea nitrogen and creatinine reference values. Obstet Gynecol. Manahan KJ, Fanning J. 1999 May;93(5 Pt 1):780-2.
Urea, Urine (24 hours)	CCL	g/24hrs	10-20	Clinical Guide to Laboratory Tests, Tietz, 2012
Urea, Urine (Random)	CCL, RRL	mg/dL	None established	Clinical Guide to Laboratory Tests, Tietz, 1995
Uric acid (UA)	CCL, RRL James, MMMP, SSCBC	mg/dL	Female: 19+ years 2.8-6.0 Male: 19+ years 3.5-7.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
Uric acid (UA), Special Handling	CCL	mg/dL	Female: 19+ years 2.8-6.0 Male: 19+ years 3.5-7.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999
Uric Acid, Fluid	CCL	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A
Uric Acid, urine (24 hours)	CCL	g/24hrs	24 hour sample: 0.25-0.75	Clinical Guide to Laboratory Tests, Tietz, 1995
Uric Acid, urine (Random)	CCL	mg/dL	None established	N/A
Urinalysis total with culture (pregnancy, transplant, or immunocompromised)	CCL, UHE, James, MMMP, SSCBC	N/A	various	various
Urinalysis with microscopic	CCL, UHE, James, MMMP, SSCBC	N/A	various	various
Urinalysis with reflex to culture (general population)	CCL, UHE, James, MMMP, SSCBC	N/A	various	various
Urinalysis with reflex to microscopic	CCL, UHE, James, MMMP, SSCBC	N/A	various	various
Urine Appearance	CCL, UHE, James, MMMP, SSCBC	N/A	CLEAR	Urinalysis and Body Fluid, Ringsrud 1995
Urine Bacteria	CCL, UHE, James, MMMP, SSCBC	N/A	Absent	Urinalysis and Body Fluid, Ringsrud 1995
Urine Blood	CCL, UHE, James, MMMP, SSCBC	NA	Negative (Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin)	Urinalysis and Body Fluid, Ringsrud 1995
Urine Color	CCL, UHE, James, MMMP, SSCBC	N/A	Yellow	Urinalysis and Body Fluid, Ringsrud 1995
Urine Culture with Colony Count	Microbiology	CFU/mL	Culture includes colony count. Collect Time is required for each specimen submission.	N/A
Urine Eosinophils	CCL, UHE	N/A	Neg	Urinalysis and Body Fluid, Ringsrud 1995
Urine Epithelial Cells	CCL, UHE, James, MMMP, SSCBC	average cells per hpf	0-1	Urinalysis and Body Fluid, Ringsrud 1995
Urine Glucose	CCL, UHE, James, MMMP, SSCBC	mg/dL	Negative (manufacturer's sensitivity level is 75-125 mg/dL)	Urinalysis and Body Fluid, Ringsrud 1995
Urine Ketone	CCL, UHE, James, MMMP, SSCBC	N/A	Negative (manufacturer's sensitivity level is 5-10 mg/dL acetoacetic acid)	Urinalysis and Body Fluid, Ringsrud 1995
Urine Leukocyte Esterase	CCL, UHE, James, MMMP, SSCBC	N/A	Negative (manufacturer's sensitivity is 5-15 white blood cells/hpf)	Urinalysis and Body Fluid, Ringsrud 1995
Urine Myoglobin Screening	CCL, UHE, SSCBC, MMMP	N/A	Negative (Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin and myoglobin)	Urinalysis and Body Fluid, Ringsrud 1995
Urine Nitrite	CCL, UHE, James, MMMP, SSCBC	NA	Negative (Manufacturer's sensitivity is 0.06-0.1 mg/dL nitrite ion)	Urinalysis and Body Fluid, Ringsrud 1995
Urine pH	CCL, UHE, James, MMMP, SSCBC	N/A	5.0-7.0	Urinalysis and Body Fluid, Ringsrud 1995
Urine Protein	CCL, UHE, James, MMMP, SSCBC	mg/dL	Negative (Manufacturer's sensitivity is 15-30mg/dL albumin)	Urinalysis and Body Fluid, Ringsrud 1995
Urine RBC	CCL, UHE, James, MMMP, SSCBC	average cells per hpf	0-2	Urinalysis and Body Fluid, Ringsrud 1995
Urine WBC	CCL, UHE, James, MMMP, SSCBC	average cells per hpf	0-5	Urinalysis and Body Fluid, Ringsrud 1995
Urobilinogen	CCL, UHE, James, MMMP, SSCBC	E.U./dL	<2.0 E.U./dL	Urinalysis and Body Fluid, Ringsrud 1995
Vaginitis DNA Probe	Microbiology; CCL	N/A	Candida=neg/pos Gardnerella=neg/pos Trichomonas=neg/pos	N/A
Valproic Acid (VPA)	CCL, RRL	mcg/mL	All 50-120 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacokinetics, 1995;29:442-50
Vancomycin (Peak)	CCL, RRL	mcg/mL	All 20.0-40.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001 Pharmacotherapy, 1995;15:85-91
Vancomycin (Trough)	CCL, RRL	mcg/mL	All Trough: 10.0-20.0 (Therapeutic Range)	Applied Clinical Pharmacokinetics, 2001 Pharmacotherapy, 1995;15:85-91, Antimicrobial Stewardship Program, 2013
Vancomycin Resistant Enterococcus Screen	Microbiology	N/A	Negative for Vancomycin Resistant Enterococcus.	N/A
Varicella Immune Status	Special Functions	Pos/ Neg	Negative is Normal	BioPlex2200 MMRV IgG Procedure March 2010
Varicella Zoster Virus by PCR	Microbiology	N/A	Negative	N/A
Vasoactive Intestinal Peptide	Special Functions	pg/mL	Less than 100	OSU validated Range
Vitamin B12	CCL	pg/mL	19+ years 211-911	Advia Centaur Assay Manual, VB12 111658 Rev. N, 2008-09; Pediatric Reference Ranges, Soldin, 1999
Vitamin D 1,25 (new 4/7/2015)	Special Functions	pg/mL	20-79 pg/mL	package insert
Vitamin D, Total	Special Functions (updated 11/4/2014)	ng/mL	30 - 100	DiaSorin
von Willebrand Factor Activity	CCL	%	40-200	OSU Normal Range Study
von Willebrand Factor Antigen	CCL	%	17+ years; 50-180	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987
Von Willebrand Multimeric Analysis	BRL	Bands	Normal / Abnormal	Normal Range Study
von Willebrand Workup	CCL	N/A	N/A	N/A
Warm Auto Absorption	Blood Bank	N/A	NA	NA
WBC CAST	CCL, UHE, James, MMMP, SSCBC	per hpf	negative	Urinalysis and Body Fluid, Ringsrud 1995
White Blood Cell Count (WBC)	CCL, RRL James, MMMP, SSCBC	x10 <sup>3</sup> /uL or K/uL	>18years: 4.5-11.0	Clinical Guide to Laboratory Tests, Tietz, 1995
Whole Blood Alcohol Legal	Tox	g/dL	none detected	NA
Yeast Identification	Microbiology	N/A	NA	N/A
Yeast Screen	Microbiology	N/A	Negative	N/A
Yersinia Screen	Microbiology	N/A	Reference Interval: negative	N/A
β2 Glycoprotein 1 IgG	CCL	CU	≤ 20	Inova Quanta-Flash Package Insert Verified in house
β2 Glycoprotein 1 IgM	CCL	CU	≤ 20	Inova Quanta-Flash Package Insert Verified in house
β2 Glycoprotein 1, Domain 1	CCL	CU	≤ 19.9	Inova Quanta-Flash Package Insert Verified in house