

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://clinlablabs.osumc.edu">https://clinlablabs.osumc.edu</a>									
<i>This document applies all laboratory testing at OSU/WMC Clinical Laboratories. This includes:</i>									
Peters Core Laboratory: 2001 Polaris Pkwy, Inwood/Centre Suite 1500, Columbus OH 43240									
Ackerman Laboratories: 600 Ackerman Rd, Rm 525, Columbus OH 43202									
Merchouse Laboratory: 1st Fl Merchouse Medical Plaza Tower, 2050 Kenny Rd, Columbus OH 43221									
Spectrum Laboratory: 1145 Olentangy River Rd, Rm 2030, Columbus, OH 43212									
Clinical Laboratories (LH): 410 West 10th Avenue, Columbus OH 43210									
Clinical Laboratories (LH): 181 Taylor Avenue, Columbus OH 43203									
Analyte	Synonym	Methodology / Reaction Type	Instrument or Kit Manufacturer	Units	Reference Ranges	Critical Values	Source of Reference Range	Technical Range / AMR	Reportable Range / CRR
Base Excess	Base Excess, Base Deficit	Calculation of the expression that approximates the amount of acid or base required to titrate one liter of blood back to a normal pH of 7.40.	Radiometer	mmol/L	-3.0 to +3.0	N/A	Contemporary Practice in Clinical Chemistry 3rd Edition 2016, Chapter 32. Table 32-1 p450	-30.0 - 30.0	-30.0 - 30.0
HCO <sub>3</sub>	Bicarbonate, CO <sub>2</sub> Whole Blood	Calculation	Radiometer	mmol/L	Arterial: >30 Days: 22-28 Venous: 22-29	N/A	Arterial: Blood Gases and Critical Care Testing Physiology, Clinical Interpretations, and Laboratory Applications, 3rd Edition, 2021 (p.3). Venous: Clinical Guide to Laboratory Tests 3rd Edition, Tietz, 1995	Calculation	Calculation
Glucose, Whole Blood	Whole Blood Glucose	Amperometric	Radiometer	mg/dL	1+ years: 70-99 >18 years Male: 40.2-50.4 Female: 34.2-45.6	≥1 year: <50 and >400 <1 year: <40 and >200	Clinical Guide to Laboratory Tests, 3rd Edition Tietz, 1995; Pediatric Reference Ranges, Soidin, 1999	1-1030	1-1030
Hemastercit (Calculated)	N/A	Calculation	Radiometer	%	>18 years Male: 40.2-50.4 Female: 34.2-45.6	N/A	Derived from total hemoglobin reference interval. ABL 800 FLEX Reference Manual, 2008.	Calculation	Calculation
Total Hemoglobin, Whole Blood	N/A	Coximetry	Radiometer	g/dL	>18 years Male: 13.4-16.8 Female: 11.4-15.2	≥2x: <7.0 and >22.0 ≥4.5x: <8.0 and >22.0 0.4-7x: <11.0 and >22.0	OSU Internal Normal Range Study, October 2018	4.8-23.5	4.8-23.5
Ionized Calcium, Whole Blood	ICA	Potentiometric	Radiometer	mg/dL	4.60-5.30	<3.40 and >6.20	Blood Gases and Critical Care Testing Physiology, Clinical Interpretations, and Laboratory Applications, 3rd Edition, 2021 (p.102)	1.00-13.00	1.00-13.00
Ionized Calcium, Serum	LAB54	Potentiometric	Radiometer	mg/dL	4.60-5.30	<3.40 and >6.20	Blood Gases and Critical Care Testing Physiology, Clinical Interpretations, and Laboratory Applications, 3rd Edition, 2021 (p.102)	1.00-13.00	1.00-13.00
Ionized Calcium (CRRT)	ICACRT	Potentiometric	Radiometer	mg/dL	1.00-2.00	N/A	Email_ICA CRRT RR Physician Established 11.19.2020	1.00-13.00	1.00-13.00
Lactate, Whole Blood, Lactate, Blood	Lactic Acid	Amperometric	Radiometer	mmol/L	Adult: 0.5 - 1.6	≥5.0	ABL 800 Flex Reference Manual, 2008	0.0-30.0	0.0-30.0
sO <sub>2</sub>	sO <sub>2</sub>	Visible absorption spectroscopy	Radiometer	%	Arterial: 95-100 Arterial: 86-96 Venous: 70-80	N/A	Clinical Guide to Laboratory Tests, 3rd Edition, Tietz, 1995 Venous: Blood Gas O <sub>2</sub> Sat: Radiometer Bulletin No: 44 Compendium of reference intervals.	5-100	5-100
pCO <sub>2</sub>	N/A	Potentiometric	Radiometer	mmHg	>31 days Arterial: 32-48 Venous: 36-52	Arterial: <20 and >65 Venous: <24 and >64	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.12225. Pub 2014 Jan 3.	5-115	5-115
pH	N/A	Potentiometric	Radiometer	pH	>31 days Arterial: 7.35-7.45 Venous: 7.32-7.43	Arterial: <7.20 and >7.55 Venous: <7.17 and >7.52	Clinical Guide to Laboratory Tests Tietz 3rd Edition, 1995.	6.80-8.00	6.80-8.00
pO <sub>2</sub>	N/A	Amperometric	Radiometer	mmHg	Arterial: 83-108 Venous: 75-80	Arterial: ≥44 Venous: N/A	Arterial: Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995 & Fundamentals of Clinical Chem, 1987 Venous: Respirology, 2014 Feb; 19(2):168-75. doi:10.1111/resp.12225. Pub 2014 Jan 3. © 2012 Radiometer Medical ApS, All rights reserved. 095-050_20120609	0-700	0-700
Potassium, Whole Blood	Whole Blood Potassium	Potentiometric	Radiometer	mmol/L	18+ years: 3.5-5.0	1-1.6x upper: <3.0 and >6.0 <1 year: <3.0 and >7.0	Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995	1.0-14.0	1.0-14.0
Sodium, Whole Blood	Whole Blood Sodium	Potentiometric	Radiometer	mmol/L	1+ years: 135-145	<125 and >160	Blood Gases and Critical Care Testing Physiology, Clinical Interpretations, and Laboratory Applications, 3rd Edition, 2021 (p.165)	80-175	80-175
Carboxyhemoglobin	Carboxyhemoglobin	Coximetry	Radiometer	%	<1.5	N/A	ABL 800 Flex Reference Manual 2008	0.0-50.0	0.0-50.0
Methemoglobin	Methemoglobin	Coximetry	Radiometer	%	<1.5	N/A	ABL 800 Flex Reference Manual 2008	0.0-30.0	0.0-30.0
Oxymethemoglobin	Oxymethemoglobin	Coximetry	Radiometer	%	Adult: 94-98	N/A	ABL 800 Flex Reference Manual 2008	0-100	0-100
pH, Pleural Fluid	Fluid pH (by blood gas analyzer)	Potentiometric	Radiometer	pH	N/A	N/A	N/A	6.80-8.00	6.80-8.00
pCO <sub>2</sub> Cord Blood Gas	pCO <sub>2</sub> , Cord Blood Arterial pCO <sub>2</sub> , Cord Blood Venous	Potentiometric	Radiometer	mmHg	Cord Blood Arterial: 41-58 Cord Blood Venous: 33-44	N/A	Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995	5-115	5-115
pH Cord Blood Gas	pH, Cord Blood Arterial pH, Cord Blood Venous	Potentiometric	Radiometer	pH	Cord Blood Arterial: 7.23-7.33 Cord Blood Venous: 7.30-7.40	N/A	Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995	6.80-8.00	6.80-8.00
pO <sub>2</sub> Cord Blood Gas	pO <sub>2</sub> , Cord Blood Arterial pO <sub>2</sub> , Cord Blood Venous	Amperometric	Radiometer	mmHg	Cord Blood Arterial: 12-24 Cord Blood Venous: 23-35	N/A	Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995	0-700	0-700
sO <sub>2</sub> Cord Blood Gas	sO <sub>2</sub> , Cord Blood Arterial sO <sub>2</sub> , Cord Blood Venous	Visible absorption spectroscopy	Radiometer	%	Cord Blood Arterial: 8-9 Cord Blood Venous: 16-83	N/A	Brit Journ Obst Gyn 8:2000 Vol 107 pp 987-994 Cord Bld O <sub>2</sub> SAT in vigorous infants at birth: What is normal?	5-100	5-100
Bicarbonate (HCO <sub>3</sub> ) Cord Blood Gas	Bicarbonate, Cord Blood Arterial Bicarbonate, Cord Blood Venous	Calculation	Radiometer	mmol/L	Cord Blood Arterial: 20-25 Cord Blood Venous: 16-25	N/A	Clinical Guide to Laboratory Tests, Tietz 3rd Edition, 1995	Calculation	Calculation
Base Excess/Deficit, Cord Blood Gas	Base Excess/Deficit, Cord Blood Arterial Base Excess/Deficit, Cord Blood Venous	Calculation of the expression that approximates the amount of acid or base required to titrate one liter of blood back to a normal pH of 7.40.	Radiometer	mmol/L	Cord Blood Arterial: -3.0-3.0 Cord Blood Venous: -2.0-2.0	N/A	Email_Cord blood Gas RR Physician Established Base Excess_11-2020	-30.0 - 30.0	-30.0 - 30.0
Acetaminophen Level	Tylenol, Datril, Tempra, Liqueirin, Tenlap	Enzyme Immunoassay	Beckman	mcg/mL	Therapeutic: 10.0 - 32.0	>150.0 after 4 hours of ingestion	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002 Applied Therapeutics, Inc. and Micromedex On OSU Intranet.	10.0-200.0	10.0-600.0
ALT	SGPT, Alanine Aminotransferase	Transfer of the amino group from alanine to α-oxoglutarate to form pyruvate and glutamate. The pyruvate enters a lactate dehydrogenase (LD) catalyzed reaction with NADH to produce lactate and NAD <sup>+</sup> . The decrease in absorbance due to the consumption of NADH is measured as 405nm and is proportional to the ALT activity in the sample.	Beckman	U/L	18+ years: Female: 9-48 Male: 10-52	N/A	OSU/WMC Reference Range Study effective 12.11.2013; verified by OSU/WMC Reference Interval Study 2021. Pediatric Reference Ranges, Soidin, 1999 (Lower end of reference range modified to agree with the linear limit.)	3-500	3-25,000
Albumin	N/A	The Albumin method is a modification of the Doumas and Rodkey procedures utilizing a different buffering system. At pH 4.2, bromocresol green reacts with albumin to form an intense green complex. The absorbance of the albumin-BCG complex is measured bichromatically (660/800nm) and is proportional to the albumin concentration in the sample.	Beckman	g/dL	19+ years: 3.5-5.0	N/A	Tietz 2nd Edition referenced by Beckman Coulter IFU for recumbent adult and verified by OSU/WMC Reference Interval Study 2021.	1.5-6.0	1.5-18.0

Albumin, Body Fluid	N/A	See ALB	Beckman	g/dL	<p><b>Plasma:</b> Serum-plasma fluid albumin gradients of <math>&gt;1.2</math> g/dL are consistent with transudates.</p> <p><b>Peritoneal:</b> Serum-csives albumin gradient (SAG) of 1.1 g/dL or greater suggests portal hypertension.</p> <p><b>Pericardial:</b> The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.</p>	N/A	Pleural: Roth, B.J., et al. Chest, Vol 98, 546-549, 1990. Peritoneal: Rayson, B.A. Ann Intern Med. 1992;117:215-220.	1.5-6.0	1.5-6.0
Albumin, CSF	Microalbumin, CSF	Turbidimetry	Beckman	mg/dL	10.0-30.0	N/A	CCLM Vol 54 issue 2 p285-292 Feb 2016	1.0-45.0	1.0-450.0
Alcohol (Ethanol), Blood	Serum Alcohol	Based on an enzymatic reaction.4 Reagent 1 contains the buffering system. Reagent 2 contains alcohol dehydrogenase (ADH), the coenzyme nicotinamide adenine dinucleotide (NAD), buffer, preservatives, and stabilizers. The ADH catalyzes the oxidation of ethyl alcohol to acetaldehyde. During this reaction, NAD is reduced to NADH. The increase in absorbance at 340 nm is proportional to the concentration of alcohol in the specimen.	Beckman	mg/dL	<10	≥300	N/A	10-600	10-600
Alk Phosphatase	ALP	This ALP procedure is based on the method developed by Bowers and McComb2 and has been formulated as recommended by the AACCC and FCC3. Alkaline phosphatase activity is determined by measuring the rate of conversion of p-nitrophenylphosphate (pNPP) in the presence of 2-amino-2-methyl-1-propanol (AMP) at pH 10.4.	Beckman	U/L	19+ years: 32-126	N/A	OSUWMC Reference Range Study effective 12.11.2013; Verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999 Synchro Performance Verification Manual A22219	5-1,500	5-15,000
Alpha 1 Antitrypsin	N/A	Turbidimetry	Beckman	mg/dL	84-218	N/A	Package Insert. Verified by OSUWMC Reference Interval Study 2021.	30-500	30-5,000
Ammonia	Ammonia, Venous	Direct enzymatic procedure based on the following reaction sequence:- Glutamate dehydrogenase (GLDH) NH4 + α-ketoglutarate + NADH → Glutamate + NAD + H2O. The reagent contains LDH in excess, to rapidly reduce endogenous pyruvate so that it does not interfere with the assay system; reagent also incorporates a patented stabilization process which renders the reagent stable in the liquid phase.	Beckman	umol/L	6-47	N/A	Package Insert	10-600	10-3,000
Ammonia, Arterial	N/A	Direct enzymatic procedure based on the following reaction sequence:- Glutamate dehydrogenase (GLDH) NH4 + α-ketoglutarate + NADH → Glutamate + NAD + H2O. The reagent contains LDH in excess, to rapidly reduce endogenous pyruvate so that it does not interfere with the assay system; reagent also incorporates a patented stabilization process which renders the reagent stable in the liquid phase.	Beckman	umol/L	6-47	N/A	Package Insert	10-600	10-3,000
Amylase	N/A	The release of 2-chloro-4-nitrophenol (CNP) from the substrate and the resulting absorbance increase per minute is directly related to the α Amylase activity in the sample. The resulting increase in absorbance can be measured spectrophotometrically at 410/480nm.	Beckman	U/L	19+ years: 20-103	0-18 years: ≥400 19+ years: ≥500	Prior study verified by OSUWMC Reference Interval Study 2021.	10-2,000	10-10,000
Amylase, 24 Hour Urine	N/A	See Amylase	Beckman	U/24 hrs	24 hour sample: 0-400	N/A	OSU validated 48 outpatients from Family Practice. See Method Validation binders.	N/A (calculation)	N/A (calculation)
Amylase, Body Fluid	N/A	See Amylase	Beckman	U/L	<p>Pleural: Pleural fluid rich in amylase (fluid amylase to serum/plasma amylase ratio <math>&gt;1</math>) is associated with acute and chronic pancreatitis, esophageal leakage, malignancy, cirrhosis, or pneumonia.</p> <p>Pancreatic cyst: Very low pancreatic cyst fluid amylase concentrations (<math>&lt;250</math> U/L) exclude a pseudocyst in the majority of cases.</p> <p>Peritoneal, Drainage, PFU: The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.</p>	N/A	<p>Pleural: State of the art. The pleura Sahn SA Ann Rev Respir Dis. 1988;138(1):184. Pancreatic cyst: Eha GH, et al. Am J Gastroenterol. 2008;113:464-479.</p>	10-2,000	10-100,000
Amylase, Urine Random	N/A	See Amylase	Beckman	U/L	None established	N/A	N/A	10-1,500	10-75,000
Anion Gap	Gap	Calculation: ANION GAP=(NA+K)-CL+CO2	N/A	mmol/L	7-17	N/A	OSUWMC Study 2015	N/A	N/A
Anti Streptolysin O	N/A	Turbidimetry	Beckman	IU/ml	<250	N/A	Package Insert. Verified by OSUWMC Reference Interval Study 2021.	100-1,000	100-10,000
AST	ASOT, Aspartate Aminotransferase	Catalyzes the transamination of aspartate and α-oxoglutarate, forming L-glutamate and oxalacetate. The oxalacetate is then reduced to L-malate by malate dehydrogenase, while NADH is simultaneously converted to NAD+. The decrease in absorbance due to the consumption of NADH is measured at 340 nm and is proportional to the AST activity in the sample.	Beckman	U/L	19+ years: 10-39	N/A	Verified by OSUWMC Reference Interval Study 2021.	3-1,000	3-50,000
Beta HCG Quant, Blood	Quantitative Serum Pregnancy Test	Two-site Sandwich Immunoassay Chemiluminometric	Siemens	mIU/ml	<p>Non-pregnant: &lt;10.0 Postmenopausal: &lt;10.0</p> <p>2-4 Weeks: 39.1 - 8,388.0 5-6 Weeks: 861.0 - 58,769.0 6-8 Weeks: 8,636.0 - 218,085.0 9-10 Weeks: 18,709.0 - 244,467.0 11-12 Weeks: 23,143.0 - 181,899.0 13-22 Weeks: 6,303.0 - 97,171.0 23-40 Weeks: 446.0 - 24,443.0</p>	N/A	Abvia Centaur HCG Package Insert 10634917, EN Rev. F, 2011-04	2.6-1,000.0	2.6-128,000,000.0
B-CG Qualitative, Blood	Serum Pregnancy Test	Lateral-flow test using a monoclonal antibody specific to the beta subunit of BCG.	Alere	Qualitative	Non-pregnant = Negative Pregnant = Positive	N/A	Package Insert	Positive Negative	Positive Negative

Beta-Hydroxybutyrate	Beta Hydroxybutyrate	D-3-Hydroxybutyrate in the presence of NAD gets converted to acetoacetate and NADH. NADH produced reacts with INT in the presence of diaphorase to produce color at 505nm. Absorbance is proportional to B-hydroxybutyrate in sample.	Beckman	mmol/L	<0.27	≥1.20	Staubig Package Insert and verified by OSUWMC Reference Interval Study 2021.	0.10-8.00	0.10-24.00
Bicarbonate, Fluid	FCO2, CO2 Fluid	See CO2	Beckman	mmol/L	<b>Stand:</b> The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.	N/A	N/A	5-45	5-90
Bilirubin - Baby	Bilirubin, Total (Neonatal)	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	0 Days: 1.4-8.7 1 Day: 3.4-11.5 3 Days: 1.5-12.0 5 Days: 0.3-1.2 1 Year: <1.5	<1 year: ≤14.0	Clinical Guide to Laboratory Tests, Kaplan, 2003	0.1-30.0	0.1-90.0
	Bilirubin, Direct (Neonatal)	Direct (conjugated) bilirubin complex directly with a diazonium salt of 3,5-dichloroamine (DPD) in an acid medium to form azobilirubin. The direct bilirubin in serum is directly proportional to the color development of azobilirubin which is measured bichromatically at 570/660 nm.			All: < 0.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	0.1-10.0	0.1-20.0
Bilirubin Direct	BILD	Direct (conjugated) bilirubin complex directly with a diazonium salt of 3,5-dichloroamine (DPD) in an acid medium to form azobilirubin. The direct bilirubin in serum is directly proportional to the color development of azobilirubin which is measured bichromatically at 570/660 nm.	Beckman	mg/dL	All: < 0.3	N/A	Clinical Guide to Laboratory Tests, Tietz 1995, verified by OSUWMC Reference Interval Study 2021.	0.1-10.0	0.1-20.0
Bilirubin Total	BILT	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	Adult: <1.5	N/A	Clinical Guide to Laboratory Tests, Tietz 1995, verified by OSUWMC Reference Interval Study 2021.	0.1-30.0	0.1-90.0
Bilirubin, Total, Fluid	FBLT	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	<b>Precaution:</b> Peritoneal bilirubin concentrations greater than that of serum/plasma may suggest bile within the abdomen. <b>Drainage:</b> Drain fluid bilirubin concentration to serum/plasma bilirubin concentration ratios exceeding 5 indicates bile leakage.	N/A	Peritoneal: Rumay BA J Clin Gastroenterol. 1987;9(5):543. Drain: Darwin. Gastrointest Endosc: 2019 Jun;71(1):99-104.	0.1-30.0	0.1-90.0
B-Type Natriuretic Peptide	BNP	Two site sandwich immunoassay using direct chemiluminescent technology which uses constant amounts of two monoclonal antibodies.	Siemens	pg/mL	All: 0-100	N/A	Atellica IM BNP Package Insert 11202199_EN Rev. 05-2020-11	2-4,500	2-4,500
BUN	N/A	Urea is hydrolyzed enzymatically by urease to yield ammonia and carbon dioxide. The ammonia and oxoglutarate are converted to glutamate in a reaction catalyzed by L-glutamate dehydrogenase (GLDH). Simultaneously, a molar equivalent of reduced NADH is oxidized. 3,4,5 Two molecules of NADH are oxidized for each molecule of urea hydrolyzed. The rate of change in absorbance at 340 nm, due to the disappearance of NADH, is directly proportional to the BUN concentration in the sample.	Beckman	mg/dL	All: 7-25	≥101	Beckman Coulter IFU for serum verified by OSUWMC Reference Interval Study 2021.	2-130	2-650
C Reactive Protein	N/A	Measurement of the rate of decrease in light intensity transmitted (increase in absorbance) through particles suspended in solution is the result of complexes formed during the immunological reaction between the CRP of the patient serum and rabbit anti-CRP antibodies coated on latex particles.	Beckman	mg/L	All: <10.00	N/A	Clinical Guide to Laboratory Tests, Tietz, 2005; Verified by OSUWMC Reference Interval Study 2021.	0.20-80.00	0.20-480.00
C Reactive Protein For Cardiac Risk	CRPR, CRP High Sensitivity				All: Non-specific: >10.00 High Risk: ≥2.00 Low Risk: <2.00		2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease. Circulation. 2019 Sep 10;140(11):e596-e646.		
C3 Complement	C3	Turbidimetry	Beckman	mg/dL	87-200	N/A	Package Insert. Verified by OSUWMC Reference Interval Study 2021.	15-500	15-1,500
C4 Complement	C4	Turbidimetry	Beckman	mg/dL	18-52	N/A	Historic Reference Range. Verified by OSUWMC Reference Interval Study 2021.	8-150	8-450
CA 125	CA125N	Two-site sandwich immunoassay using direct chemiluminescent technology	Siemens	U/mL	All: ≤30	N/A	Advia Centaur CA 125II Package Insert 128516 Rev. H, 2009-02	3-600	3-360,000
CA 15-3N	CA153N	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	U/mL	0.0-32.4 for both female and male	N/A	Atellica IM CA 15-3 Package Insert 11206285_EN Rev. 04, 2020-03	3.0-200.0	3.0-200,000.0
CA 19-9	N/A	Two-site sandwich immunoassay using direct chemiluminescent technology	Siemens	U/mL	All: ≤37.00	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information	15.00-700.00	15.00-33,600,000.00
CA27.29 (Breast Care Ass Ag)	BR	Competitive immunoassay using direct chemiluminescent technology	Siemens	U/mL	All: ≤38.6	N/A	Advia Centaur, BR (CA 27.29) Package Insert 116751 Rev. J, 2009-07	9.0-450.0	9.0-90,000.0
Calcium	CA	Calcium ions (Ca <sup>2+</sup> ) reacting with Arsenazo III (2,2'-(1,8-Dihydroxy-3,6-dithiophosphorylene-2,7-bisoxaz)bisbenzenesulfonic acid) to form an intense purple colored complex. Absorbance of the Ca-Arsenazo III complex is measured bichromatically at 660/700 nm.	Beckman	mg/dL	>1 year: 8.6-10.5	<6.0 and >12.0	Established by OSUWMC Reference Interval Study 2013, verified by OSUWMC Reference Interval study 2021.	4.0-18.0	4.0-18.0
Calcium, Urine 24HR	N/A	See Calcium	Beckman	mg/24 hours	100.0-300.0	N/A	N/A	N/A (Calculation)	N/A (Calculation)
Calcium/Creat Ratio, Random Urine	CALCR	See Calcium / Creatinine	Beckman	Ca mg/Creat mg	0-6 months: <0.86 7-18 months: <0.60 19 months-2 years: <0.42 2 years-0.29	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Calculated LDL Cholesterol	LDL, Low-Density Lipoprotein Cholesterol	Calculation: CHOL - [(TRIG/5)+HDL]	N/A	mg/dL	Adult optimal : <100	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP III) (Circulation. 2002;106(3):143-342)	N/A	N/A
Carbamazepine Total Level	CARB	Competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change.	Beckman	mcg/mL	All: 4.0-12.0 (Therapeutic Range)	>15.0	Applied Clinical Pharmacokinetics, 2001 Micromedex, OSU Intranet	2.0-20.0	2.0-100.0
CEA	N/A	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	All: ≤5.0	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995. See source link for additional Reference Range information	2.0-100.0	2.0-8,000,000.0
CEA, Fluid	FCEA	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information	2.0-100.0	2.0-10,000.0
Ceruloplasmin	CERP	Turbidimetry	Beckman	mg/dL	20-60	N/A	Verified by OSUWMC Reference Interval Study 2021.	6-200	6-4,000

Chloride	CL	The ISE module for Na <sup>+</sup> , K <sup>+</sup> , and Cl <sup>-</sup> employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	18+ years: 98-108	<75 and >130	Established by OSU/WMC Reference Interval Study 2013, verified by OSU/WMC Reference Interval study 2021	50-200	50-200
Chloride, 24 Hr-Urine	UCL_24	See Chloride	Beckman	mmol/24hrs	110-250	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Chloride, Fluid	FCL	See Chloride	Beckman	mmol/L	The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.	N/A	N/A	50-200	50-200
Chloride, Random Urine	UCLR	See Chloride	Beckman	mmol/L	Random: None established	N/A	N/A	15-400	15-400
Cholesterol Total	CHOL	Cholesterol esters in serum are hydrolyzed by cholesterol esterase (CHE). The free cholesterol produced is oxidized by cholesterol oxidase (CHO) to cholest-4-en-3-one with the simultaneous production of hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ), which oxidatively couples with 4-aminonaphthylamine and phenol in the presence of peroxidase to yield a chromophore. The red quinonimine dye formed can be measured spectrophotometrically at 540/600 nm as an increase in absorbance.	Beckman	mg/dL	Desirable: <200 Borderline: 200-239 High: >240	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP III) (Circulation. 2002;106:3143-3421)	25-700	25-2,100
Cholesterol, Body Fluid	FCIOL	See Cholesterol	Beckman	mg/dL	<u>Pleural:</u> Pleural fluid cholesterol concentrations > 200 mg/dL are associated with pseudochylous effusions. <u>Peritoneal:</u> Peritoneal fluid cholesterol concentrations greater than 32-70 mg/dL may suggest malignant ascites.	N/A	<u>Pleural:</u> Hooper C, et al. Thorax. 2010 Aug;65(Suppl2):ii4-17. McGrath, et al. Int J Clin Pract. 2009 Nov;63(11):1653-9. <u>Peritoneal:</u> Block, et al. Crit Rev Clin Lab Sci. 2013;50:107-124.	25-700	25-700
CK	Creatine Kinase, CKB	CK reversibly catalyzes the transfer of a phosphate group from creatine phosphate to (ADP) to give creatine and (ATP) as products. The ATP formed is used to produce glucose-6-phosphate and ADP from glucose. This reaction is catalyzed by hexokinase (HK) which requires magnesium ions for maximum activity. The glucose-6-phosphate is oxidized by the action of the enzyme glucose 6-phosphate dehydrogenase (G6P-DH) with simultaneous reduction of the coenzyme nicotinamide adenine dinucleotide (NADP) to give NADPH and 6-phosphogluconate. The rate of increase of absorbance at 340/660 nm due to the formation of NADPH is directly proportional to the activity of CK in the sample.	Beckman	U/L	19+ years: Female: 30-184 Male: 30-220	≥500	Established by OSU/WMC Reference Interval Study 2013, verified by OSU/WMC Reference Interval study 2021	10-2,000	10,200,000
CO2 Total	CO2	Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) and phosphoenolpyruvate (PEP) are converted to oxaloacetate and phosphate in the reaction catalyzed by phosphoenolpyruvate carboxylase (PEPC). Malate dehydrogenase (MD) catalyzes the reduction of oxaloacetate to malate with the concomitant oxidation of reduced nicotinamide adenine dinucleotide (NADH). This oxidation of NADH results in a decrease in absorbance of the reaction mixture measured bichromatically at 300/410 nm proportional to the Bicarbonate content of the sample.	Beckman	mmol/L	3+ years: 21-31	<10 and >40	Beckman Coulter IFU verified by OSU/WMC Reference Interval Study 2021.	5-45	5-45
Cortisol	ACTH Stimulation, CORT	Competitive immunoassay using direct chemiluminescent technique.	Siemens	mcg/dL	All: 3.09-22.40	N/A	Atellica IM Cortisol Package Insert 11200393_EN Rev. 03-2020-03	0.50-75.00	0.50-2,400.00
Creatinine	CREA	This Creatinine procedure is a kinetic modification of the Jaffe procedure, in which creatinine reacts with picric acid at alkaline pH to form a yellow orange complex. The rate of change in absorbance at 520/800nm is proportional to the creatinine concentration in the sample.	Beckman	mg/dL	19+ years: Female: 0.50 - 1.20 Male: 0.70-1.30	>10.00	OSU/WMC Reference Range Study effective 12.11.2013, verified by OSU/WMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldan, 1999	0.20-25.00	0.20-25.00
Creatinine, 24 HR Urine	UCRE_24	See Creatinine	Beckman	g/24 hrs	18+ years male: 0.80-2.00 18+ years female: 0.60-1.80	N/A	NKDIP traceable Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldan, 1999	N/A (Calculation)	N/A (Calculation)
Creatinine, 8 Hour Urine	SUCR	Calculation Urine Creatinine (mg/dL) X Urine Volume (mL) Serum/Plasma Creatinine (mg/dL) x Time (min)  *serum/plasma creatinine (CREA) must be collected within ~24 hours from the time of the urine collection for the calculation to work in LIS	Beckman	ml/Min	N/A	N/A	N/A	N/A	N/A
Creatinine, Body Fluid	FLCREA	See Creatinine	Beckman	mg/dL	<u>Peritoneal and drainage:</u> Fluid creatinine concentrations that are greater than serum plasma creatinine concentrations may imply intraperitoneal leakage of urine outside of the urinary tract. <u>Pleural:</u> Pleural fluid creatinine to serum plasma creatinine concentration ratio > 1 suggests amebiasis.	N/A	<u>Peritoneal:</u> Manahan RJ, et al. Obstet Gynecol. 1999 May;93(5 Pt 1):780-2. <u>Pleural:</u> Toubes, et al. J Thorac Dis. 2017;9(5):1209-1218.	0.20-25.00	0.20-25.00
Creatinine, Random Urine	UCREER	See Creatinine	Beckman	mg/dL	N/A	N/A	N/A	1.00-300.00	1.00-900.00
Digoxin Level	Lanoxin, DIG	Enzyme immunoassay	Beckman	ng/mL	0.5-1.0 (Therapeutic Range)	≥2.1	Applied Clinical Pharmacokinetics, Bumer, 2001	0.3-5.0	0.3-10.0
eGFR <sub>cr</sub>	Estimated glomerular filtration rate	CKD-EPI eGFR Calculation: eGFR = 142 x min(Ser/Cr, 1) x max(Ser/Cr, 1) - 1.200 x 0.9938 <sup>Age</sup> x 1.012 <sup>[if female]</sup>  where k = 0.7 (female) or 0.9 (male) a = -0.241 (female) or -0.302 (male) Ser = serum creatinine in mg/dL; divide by 88.4 for creatinine in μmol/L Age (years) The "min(Ser/Cr, 1)" factor indicates the minimum of Ser/Cr or 1.0 and "max(Ser/Cr, 1)" indicates the maximum of Ser/Cr or 1.0.	N/A	ml/min/1.73m <sup>2</sup>	≥ 60 mL/min/1.73m <sup>2</sup>	N/A	KDIGO 2012 Clinical Practice Guidelines	N/A	≤ 90 mL/min/1.73m <sup>2</sup>

Estrodiol Enhanced	eE2	Competitive assay format. The endogenous estradiol contained in a sample is released from its binding proteins by releasing agent. Then, a sheep monoclonal anti-estradiol antibody labeled with acridinium ester is added to bind available estradiol. Finally, an estradiol derivative capture solid phase is added to the reaction to compete with estradiol for the binding of the acridinium-labeled antibody. After washing, acid and base are dispensed to initiate the chemiluminescent reaction.	Siemens	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	N/A	Advia Centaur, Enhanced Estradiol (eE2) Package Insert 10491467 Rev. C, 2010-09; Pediatric Reference Ranges, Saldin, 1999	11.8-3,000.0	11.8-150,000.0
Ferritin	FERIB	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/ml	Female 20+ years: 10.0-291.0 Male 20+ years: 72.0-322.0	N/A	Aetlica IM Ferritin Package Insert 11200601, EN Rev. 03-2019-06; Pediatric Reference Ranges, Saldin, 1999	0.9-1,650.0	0.9-1,650,000.0
Folate, Serum	FOLSB	Competitive immunoassay using direct chemiluminescent technology	Siemens	ng/ml	19+ years: <5.38	N/A	Aetlica IM Folate Package Insert 11200602, EN Rev. 04-2020-11; Pediatric Reference Ranges, Saldin, 1999	0.56-24.00	0.56-960.00
FSH	Follicle stimulating hormone	Two-site sandwich immunoassay using direct chemiluminescent technology	Siemens	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, postmenopausal: <23.0-116.3	N/A	Aetlica IM FSH Package Insert 11200384, EN Rev. 06-2020-09	0.3-200.0	0.3-6,400.0
GGT	Gamma Glutamyl Transferase	A modification of the Sraaz procedure; 2,3 GGT catalyzes the transfer of the gamma-glutamyl group from the substrate, gamma-glutamyl-3-carboxy-4-nitroimidazole, to glycylglycine, yielding 5-amino-2-nitrobenzoate. The change in absorbance at 410/400 nm is due to the formation of 5-amino-2-nitrobenzoate and is directly proportional to the GGT activity in the sample.	Beckman	U/L	19+ years: 5-64	N/A	Beckman Coulter IFU verified by OSU/WMC Reference Interval Study 2021 (lower end modified); Pediatric Reference Ranges, Saldin, 1999 (lower end of reference range modified to agree with the linear limits).	3-1,200	3-6,000
Glucose	GLUC	Glucose is phosphorylated by hexokinase (HK) in the presence of adenosine triphosphate (ATP) and magnesium ions to produce glucose-6-phosphate (G-6-P) and adenosine diphosphate (ADP). Glucose-6-phosphate dehydrogenase (G6P-DH) specifically oxidizes G-6-P to 6-phosphogluconate with the concurrent reduction of nicotinamide adenine dinucleotide (NAD+) to nicotinamide adenine dinucleotide, reduced (NADH). The change in absorbance at 340/660 nm is proportional to the amount of glucose present in the sample.	Beckman	mg/dL	1+ years: 70-99 (fasting)	>1 year: <-50 and -400 <1 year: <-40 and >200	ADA Standards October 2012, Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Saldin, 1999	10-800	10-2,400
Glucose, Body Fluid	FGLUC	See Glucose	Beckman	mg/dL	Amniotic: Amniotic fluid glucose concentrations < 10 mg/dL are consistent with intra-amniotic inflammation in patients with prelabour rupture of membranes. Peritoneal: Peritoneal glucose concentrations >50 mg/dL (2.8 mmol/L) are consistent with spontaneous bacterial peritonitis and concentrations below this are consistent with secondary bacterial peritonitis due to gut perforation. Pericardial: Pericardial fluid glucose to serum/plasma glucose ratios are 1.0 in presumed 'normal' patients. Pancreatic Body Cyst: Pancreatic Cyst Glucose measurements of ≤ 50 mg/dL are suggestive of a mucinous lesion. Pleural: Pleural fluid glucose concentration are equivalent to serum/plasma glucose concentrations in the absence of pleural pathology. Pleural fluid glucose concentrations < 60 mg/dL may indicate parapneumonic or malignant effusion. Other low glucose effusions.	N/A	Amniotic: Gonzalez-Bosquet, et al. J Matern Fetal Med. Jul-Aug 1999;8(4):155-8. Pancreatic cyst: Carr, et al. Surgery. 2018 Mar;163(3):600-605. Peritoneal: Runyon BA, Hoeft JC Hepatology. 1985;5(2):257. Pericardial: Ben-Horin S, et al. Am J Med 2005;118:636-40. Pleural: Toubes, et al. J Thromb Dis. 2017;9(5):1209-1218. Light, RW. N Engl J Med. 2002 Jun 20;346(25):1971-1977 Synovial: Margaretten, et al. JAMA. 2007;297(13):1478-1488.	10-800	10-800
Glucose, CSF	CFG	See Glucose	Beckman	mg/dL	All: 40-70	<30 and >300	Clinical Guide to Laboratory Tests, Tietz, 1995	10-800	10-800
Haptoglobin	HAP	Turbidimetry	Beckman	mg/dL	44-215	N/A	Package Insert. Verified by OSU/WMC Reference Interval Study 2021.	30-400	30-1,200
hCG Qualitative, Urine	Urine Pregnancy Test	Lateral flow test using a monoclonal antibody specific to the beta subunit of hCG.	Alere	Qualitative	Non-pregnant = Negative Pregnant = Positive	N/A	Package Insert	Positive Negative	Positive Negative
hCG, Quant (Tumor Marker)	HCSTM	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	mIU/ml	<10.0	N/A	Advia Centaur hCG Package Insert 10634917, EN Rev. E, 2011-04	2.6-1,000.0	2.6-128,000,000.0
HDL Cholesterol	HDL	In phase one, free cholesterol in non-HDL-lipoproteins is solubilized and consumed by cholesterol oxidase, peroxidase, and ODLCT to generate a colorless end product. In phase two a unique detergent selectively solubilizes HDL-lipoproteins. The HDL cholesterol is released for reaction with cholesterol esterase, cholesterol oxidase and a chromagen system to yield a blue color complex which can be measured bichromatically at 600/700nm. The resulting increase in absorbance is directly proportional to the HDL-C concentration in the sample.	Beckman	mg/dL	20+ years: 240	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP III) (Circulation, 2002;106:3143-3421)	3-200	3-600
High-Sensitivity Troponin-I (Clinical Order)	HSTI1, Troponin I, Trop I	Three-site sandwich immunoassay using direct chemiluminescent technology	Siemens	ng/L	Female: <34 Male: <53	≥1000 first time in 24 hours	Aetlica IM Troponin Package Insert 11200498, EN Rev. 06, 2019-06	3-25,000	3-2,000,000
High-Sensitivity Troponin I (Serial Order)	HSTI2, Troponin I, Trop I	Competitive immunoassay using direct chemiluminescent technology	Siemens	umol/L	All: 3.7-13.9	N/A	Aetlica IM Homocysteine Package Insert 10995362, EN Rev. 04-2021-03	0.5-65.0	0.5-130.0
Homocysteine	HOMCYS, HCY	Competitive immunoassay using direct chemiluminescent technology	Siemens	umol/L	All: 3.7-13.9	N/A	Aetlica IM Homocysteine Package Insert 10995362, EN Rev. 04-2021-03	0.5-65.0	0.5-130.0
IgA	Immunoglobulin A	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 66-433	N/A	Package Insert. Verified by OSU/WMC Reference Interval Study 2021.	10-700	10-14,000
IgG	Immunoglobulin G	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 600-1,714	N/A	OSU/WMC Immunoglobulin Reference Range Study. Verified by OSU/WMC Reference Interval Study 2021.	75-3,000	75-60,000
IgM	Immunoglobulin M	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 45-281	N/A	Package Insert. Verified by OSU/WMC Reference Interval Study 2021.	20-500	20-50,000
Iron	N/A	TPTZ [2,4,6-Tri-(2-pyridyl)-5-triazine] as the chromogen; 3 In an acidic medium, transferrin-bound iron dissociates into free ferric ions and apo-transferrin. Hydrochloric acid and sodium ascorbate reduce the ferric ions to the ferrous state. The ferrous ions then react with TPTZ to form a blue colored complex which can be measured bichromatically at 600/500 nm. The increase in absorbance is directly proportional to the amount of transferrin bound iron present.	Beckman	mcg/dL	19+ years: 40-174	N/A	Established by OSU/WMC Reference Interval Study 2013, verified by OSU/WMC Reference Interval study 2021.	10-1,000	10-2,000

Lactate Dehydrogenase	LD	Utilizes the forward reaction of lactate to pyruvate. Lactate and NAD are converted to pyruvate and NADH analyzed by LD. NADH strongly absorbs light at 340 nm, whereas NAD does not. The rate of change of absorbance at 340 nm is directly proportional to the LD activity in the sample.	Beckman	U/L	19+ years: 100-190	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	25-1,200	25-60,000
Lactate Dehydrogenase Body Fluid	FLLD	See Lactate Dehydrogenase (LD)	Beckman	U/L	<b>CSF:</b> 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 Creutzfeldt-Jakob Disease, Bacterial meningitis, Neurosyphilis, or tumors of the central nervous system. <b>Pleural:</b> A Pleural fluid LDH to serum/plasma LDH ratio > 0.6 or a pleural fluid LDH concentration > two-thirds the upper limit of the serum/plasma LDH reference interval suggest an exudate. <b>Pericardial:</b> Pericardial fluid LDH to serum/plasma LDH ratio > 0.6 or > 300 U/L suggests an exudate. <b>Peritoneal:</b> Peritoneal fluid LDH to serum/plasma LDH ratio > 0.6 is	N/A	CSF: Clinical Utility of Biochemical Analysis of Cerebrospinal Fluid Clinical Chemistry 1995 Watson MA. Pericardial and peritoneal: Burgess. Clinica Chimica Acta 343 (2004) 61-84. Pleural Light, RW. N Engl J Med. 2002 Jun 20;346(25):1971-1977.	25-1,200	25-30,000
Lactate, Blood	Lactate, Plasma	L-lactate is oxidized to pyruvate and hydrogen peroxide by lactate oxidase (LOD). A colored product is produced by the reaction of peroxidase (POD), hydrogen peroxide, 4-aminopyrimidine and a hydrogen donor (THOS). The colored product is measured photometrically. The color intensity is proportional to the concentration of lactate in the sample under examination.	Beckman	mmol/L	All: 0.5-2.2	±5.0	Beckman Coulter Literature (BU) which cites, Tietz, N. W., Clinical Guide to Laboratory Tests, 3rd Edition, W. B. Saunders, Philadelphia, PA (1995).	0.2-10.0	0.2-30.0
Lactate, CSF	CSLACT	See Lactate	Beckman	mmol/L	Adult: 0.5 - 1.6	N/A	ABL 800 Flex Reference Manual, 2008	0.0-30.0	0.0-30.0
Lactate, Fluid	FLACT	See Lactate	Beckman	mmol/L	Adult: <2.8	N/A	Beckman Coulter literature which cites Clinical Guide to Laboratory Tests, Tietz, 1995	0.2-10.0	0.2-30.0
Lactate, Fluid	FLACT	See Lactate	Beckman	mmol/L	The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation	N/A	N/A	0.2-10.0	0.2-30.0
LDL, Direct Measure	LDL, Low-Density Lipoprotein Cholesterol	Cholesterol is consumed by cholesterol esterase, cholesterol oxidase, peroxidase and 4-aminopyrimidine to generate a colorless end product. In phase two a second detergent in reagent 2 releases cholesterol from the LDL - lipoproteins. This cholesterol reacts with cholesterol esterase, cholesterol oxidase and a chromogen system to yield a blue color complex which can be measured bichromatically at 540.660nm. The resulting increase in absorbance is directly proportional to the LDL-C concentration in the sample.	Beckman	mg/dL	Adult optimal: <100	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP III) (Circulation, 2002;106:1143-3421)	7-400	7-1,200
LH	Luteinizing Hormone	Two-site Sandwich Immunoassay Chemiluminometric	Siemens	mIU/mL	<b>Male 20-70 years:</b> 1.5-9.1 <b>Male &gt;70 years:</b> 3.1-4.6 <b>Children:</b> <0.1-6.0 <b>Female, follicular phase:</b> 1.9-12.5 <b>Female, mid cycle:</b> 8.7-76.3 <b>Female, luteal:</b> 0.5-16.9 <b>Female, pregnant:</b> <0.1-1.5 <b>Female, post-menopausal:</b> 15.9-54.0 <b>Female on Contraceptives:</b> 0.5-5.6	N/A	Archives IM LH Package Insert 11200385. EN Rev. 04-2020/06; Pediatric Reference Ranges, Soldin, 1999	0.07-200.00	0.07-6,400.00
Lipase	LIPA	Colorimetric method of Immura, et al.1 Pancreatic lipase hydrolyzes esters of long chain fatty acids from their triglycerides. The enzyme activity requires the presence of co. lipase. 1,2-Diglyceride is hydrolyzed to 2-monoacylglyceride and fatty acid. The 2-monoacylglyceride is then measured by coupled enzyme reactions catalyzed by monoacylglycerol lipase (MGLP), glycerol kinase (GK), glycerol phosphate oxidase (GPO) and peroxidase (POD).	Beckman	U/L	19+ years: 11-82	N/A	Beckman Coulter Chemistry Information Sheet, 9/2020; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, 1999	6-600	6-6,000
Lipase, Fluid	PFUNZ, PFLN15, PFLN30, PFLN45, PFLN60	See Lipase	Beckman	U/L	The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation	N/A	N/A	6-600	6-600
Lipid Panel With Reflex To Measured LDL	Lipid Screen, LIPDR	See individual testing methodology	See individual testing methodology	Varies	Varies	N/A	N/A	N/A	N/A
Lithium Level	LI	A spectrophotometric method which can be readily adapted to automated clinical chemistry analyzers. Lithium present in the sample reacts with a substituted popyrim composed of an alkaline pH, resulting in a change in absorbance which is directly proportional to the concentration of Lithium in the sample.	Beckman	mmol/L	<60 years: 0.60-1.20 600 years: 0.40-0.80 (Therapeutic Range)	>1.50	Applied Clinical Pharmacokinetics, Bauer, 2001; Clinical Pharmacokinetics, Eilers, 1995:29442-50 Bipolar Disord. 2019 Mar;21(2):117-123. Bipolar Disord. 2019 May;21(3):190-191.	0.10-5.00	0.10-5.00
Magnesium	MG	Utilizes a direct method in which magnesium forms a colored complex with xylyl'dyl blue in a strongly basic solution, where calcium interference is eliminated by glyoxaldehydeimine-N,N,N',N'-tetraacetic acid (GGDTA).3,4,5 The color produced is measured bichromatically at 520/800 nm and is proportional to the magnesium concentration.	Beckman	mg/dL	19+ years: 1.6-2.6	<1.0 and >4.4	Clinical Guide to Laboratory Tests, Tietz, 1995; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	0.5-8.0	0.5-24.0
Magnesium, 24Hr Urine	UMG, 24	See Magnesium	Beckman	mg/24hrs	72.9-121.5	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Magnesium, Urine, Random	N/A	See Magnesium	Beckman	mg/dL	N/A	N/A	N/A	0.5-10.0	0.5-100.0
Microalbumin, Random Urine	MALRB	Turbidimetry	Beckman	mg/L	N/A	N/A	Package Insert	7.0-450.0	7.0-4,500.0
Microalbumin, 24HR Urine	N/A	Turbidimetry	Beckman	mg/24 hours	≤30.0	N/A	Package Insert	N/A (Calculation)	N/A (Calculation)
Microalbumin/Creatinine Ratio (ACR)	N/A	Turbidimetry	Beckman	mg/g	≤30.0	N/A	Package Insert	N/A (Calculation)	N/A (Calculation)
Mononucleosis Screen	Mononucleosis Testing, Rapid	Immunochromatographic dipstick technology utilizing bovine erythrocyte extract	Fisher Healthcare Sure-Vue Signature	Qualitative	All: Negative	N/A	Sure Vue Signature Mono Package Insert	Positive / Negative	Positive / Negative
Osmolality	Osmolality, Serum	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	278-305	<250 and >325	OSU, In House Reference Range Validation, 2017.	50-2,000	50-2,000
Osmolality, Stool	FOSMO	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	275-300	N/A	Advanced Instruments Model AZO. June 2014.	50-2,000	50-2,000
Osmolality, Serum (Calculated)	Osmolality	(1.36 (Na +K) + 1.15 (Glucose/18) + (Urea/2.8) = Id.	Beckman	mOsm/kg	278-305	N/A	OSU, In House Reference Range Validation, 2015	N/A	N/A
Osmolality, Urine	UOSMR	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	All: 300-900	N/A	Clinical Guidelines for Laboratory Tests, Tietz, 1995	50-2,000	50-2,000

Phenobarbital Level, Random	PHOR	The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 15.0-40.0 (Therapeutic Range)	>45.0	Applied Clinical Pharmacokinetics, 2001	5.0-80.0	5.0-240.0
Phenobarbital Level, Trough	PHNO	The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 15.0-40.0 (Therapeutic Range)	>45.0	Applied Clinical Pharmacokinetics, 2001	5.0-80.0	5.0-240.0
Phenytoin Total Level	PTN	The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-20.0 (Therapeutic Range)	≥22.0	Applied Clinical Pharmacokinetics, 2001	2.5-40.0	2.5-200.0
Phosphate, Inorganic	IP	Inorganic phosphate reacts with molybdate to form a heteropolyacid complex. The use of a surfactant eliminates the need to prepare a protein free filtrate. The absorbance at 340/380 nm is directly proportional to the inorganic phosphorus level in the sample.	Beckman	mg/dL	19+ years: 2.2-4.6	<1.0 and >10.0	OSUWMC Reference Range Study effective 12.11.2013; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	1.0-20.0	1.0-60.0
Phosphorus, 24Hr	UIP_24	See Phosphorus	Beckman	g/24hrs	0.4-1.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Phosphorus, Random Urine	UIPR	See Phosphorus	Beckman	mg/dL	N/A	N/A	N/A	10.0-200.0	10.0-1,000.0
Potassium	K	The ISE module for Na <sup>+</sup> , K <sup>+</sup> , and Cl <sup>-</sup> employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	18+ years: 3.5-5.0	>18Y: >3.0 and <6.0 18Y: >3.0 and <6.0 <1Y: <3.0 and >7.0	OSUWMC Reference Range Study effective 12.11.2013; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	1.0-10.0	1.0-10.0
Potassium Body Fluid	FK	See Potassium	Beckman	mmol/L	The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.	N/A	N/A	2.0-200.0	2.0-200.0
Potassium, 24 Hr Urine	UK_24	See Potassium	Beckman	mmol/24hrs	25-125	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Potassium, Random Urine	UKR	See Potassium	Beckman	mmol/L	N/A	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	2.0-200.0	2.0-200.0
Prealbumin	PALB	Turbidimetry	Beckman	mg/dL	17-34	N/A	Package Insert. Verified by OSUWMC Reference Interval Study 2021.	3-80	3-1,600
Procalcitonin	PROCAL	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	<0.50	N/A	Ardia IM Procalcitonin 11200707, EN Rev. 01, 2019-06	0.04-50.00	0.04-2,000.00
Progesterone	PROG	Competitive immunoassay using direct chemiluminescent technology	Siemens	ng/mL	Male: 0.28-1.22 Female, follicular: Not detected-1.40 Female, luteal: 3.34-25.56 Female, mid-luteal: 4.44-28.03 Female, post-menopausal: Not detected-0.73	N/A	Aetelica IM Progesterone Package Insert 11200386, EN Rev. 04-2020-06	0.21-60.00	0.21-3,000.00
Prolactin	PROL	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	Male: 2.1-17.7 Female, nonpregnant: 2.8-29.2 Female, pregnant: 9.7-208.5 Female, postmenopausal: 1.8-20.3 All: <2 years: 3.3-14.7 2-6 years: 0.0-12.8 6-11 years: 1.2-11.4 11-18 years: 1.4-14.3	N/A	Advia Centaur Prolactin Package Insert 111746 Rev. N, 2008-09; Pediatric Reference Intervals, 5th ed Soldin, 2005	0.3-200.0	0.3-800,000.0
Protein Total	TP	Cupric ions in an alkaline solution react with proteins and polypeptides containing at least two peptide bonds to produce a violet colored complex. The absorbance of the complex at 540/600nm is directly proportional to the concentration of protein in the sample.	Beckman	g/dL	19+ years: 6.4-8.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; verified by OSUWMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	3.0-12.0	3.0-24.0
Protein, 24 Hr Urine	UPRO	See Total Protein CSF (M-TP)	Beckman	mg/24hrs	40-225	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Protein, CSF	CTP	The Urinary/CSF Protein reagent is a colorimetric method. Pyrygallol red is combined with molybdate to form a red complex with a maximum absorbance at 470nm. The assay is based on the shift in absorbance that occurs when the pyrygallol red-molybdate complex binds basic amino groups of protein molecules. Under the conditions of the test in the presence of protein, a blue-purple complex is formed with a maximum absorbance at 600nm.	Beckman	mg/dL	31+ Days: 15-45	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	4-200	4-5,000

Protein, Fluid	FLP	Cupric ions in an alkaline solution react with proteins and polypeptides containing at least two peptide bonds to produce a violet colored complex. The absorbance of the complex at 540/660nm is directly proportional to the concentration of protein in the sample.	Beckman	g/dL	Most transudates have total protein concentrations below 3.0 g/dL.	N/A	4th Edition of Tietz	0.5-12.0	0.5-24.0
Protein, Random Urine	UPROR	See Total Protein CSF (M,TP)	Beckman	mg/dL	N/A	N/A	N/A	4-200	4-5,000
PSA, Screening	EPFA	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	All: <4.00	N/A	Atellica IM PSA Package Insert 10997799, EN Rev. 03-2019-09	0.04-100.00	0.04-6,400,000.00
PSA, Reflex to Free and Total PSA	PSA	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	All: <4.00	N/A	Atellica IM PSA Package Insert 10997799, EN Rev. 03-2019-09	0.04-100.00	0.04-6,400,000.00
PSA - Tumor Marker	PSATM	Two-site Sandwich Immunoassay Chemiluminescent	Siemens	ng/mL	All: <4.00	N/A	Atellica IM PSA Package Insert 10997799, EN Rev. 03-2019-09	0.04-100.00	0.04-6,400,000.00
Rheumatoid Factor	RF	Turbidimetry	Beckman	IU/mL	≤14	N/A	Package Insert. Verified by OSUWMC Reference Interval Study 2021.	10-120	10-3,000
Salicylate Level	Aspirin	Serum is mixed with Reagent 1, which contains antibodies to salicylic acid and the coenzyme nicotinamide adenine dinucleotide (NAD). Subsequently, Reagent 2, which contains salicylic acid labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH), is added. Salicylic acid in the sample and salicylic acid-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the salicylic acid concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mg/dL	Therapeutic: 20.0-30.0	>30.0	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002, Applied Therapeutics, Inc, and Micromedex, Os OSU Intranet.	5.0-80.0	5.0-240.0
Sodium	Na+	The ISE module for Na+, K+, and Cl- employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	1+ years: 135-145	<125 and >160	Verified by OSUWMC Reference Interval Study 2021.	50-200	50-200
Sodium Body Fluid	FNA	See Sodium	Beckman	mmol/L	The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.	N/A	N/A	50-200	50-200
Sodium, 24 Hr Urine	UNA_24	See Sodium	Beckman	mmol/24hrs	40-220	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Sodium, Random Urine	UNAR	See Sodium	Beckman	mmol/L	N/A	N/A	N/A	10-400	10-400
T3 Free	FT3	Competitive immunoassay using direct chemiluminescent technology	Siemens	pg/mL	19+ years: 2.3-4.2	N/A	Atellica IM Free T3 Package Insert 10995347, EN Rev. 03-2020-06	0.2-20.0	0.2-20.0
T3 Total (Triiodothyronine)	T3, T3RIA	Competitive immunoassay using direct chemiluminescent technology	Siemens	ng/mL	19+ years: 0.60-1.81	N/A	Atellica IM Total T3 Package Insert 10995424, EN Rev. 03-2020-06	0.10-8.00	0.10-80.00
T4	Thyroxine, Total	Competitive immunoassay using direct chemiluminescent technology	Siemens	mcg/dL	19+ years: 4.5-10.9	N/A	Atellica IM Total T4 Package Insert 10995425, EN Rev. 03-2020-06; Pediatric Reference Ranges, Seldin, 1999	0.4-30.0	0.4-300.0
T4 Free	Thyroxine, Free FT4	Competitive immunoassay using direct chemiluminescent technology	Siemens	ng/dL	19+ years: 0.89-1.76	≥4.50 (ED Only)	Atellica IM Free T4 Package Insert 10995348, EN Rev. 06-2020-11; Pediatric Reference Ranges, Seldin, 1999	0.10-12.00	0.10-12.00
Testosterone	TESTOS	Competitive immunoassay using direct chemiluminescent technology	Siemens	ng/dL	Male: 87-814 Female: <48 (Female free testosterone ~0.08-0.5 ng/dL)	N/A	Advia Centaur Assay Manual, Testosterone II Package Insert 10998603, EN Rev. B, 2016-07	7-1,500	7-3,000
Theophylline Level	THEO	Based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	Adult: 5.0-30.0 (Therapeutic Range)	≥20.0	Applied Clinical Pharmacokinetics, 2001	2.5-40.0	2.5-200.0
Tobramycin Level, Random	TOBR	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	Displays in Comment Field: Peak 10.0-15.0 Trough <1.0	≥20.0 Peak	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0
Tobramycin Level, Extended Interval	TOBREI	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	Displays in Comment Field: Peak 10.0-15.0 Trough <1.0	≥20.0 Peak	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0
Tobramycin Level, Peak (Post Drug Level)	TOBRPK	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-15.0 (Therapeutic Range)	≥20.0 Peak	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0

<b>Tobramycin Level, Trough (Pre Drug Level)</b>	TOBRTR	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: <1.0 (Therapeutic Range)	≥1.0 Trough	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0
<b>Total Iron Binding Capacity</b>	Transferin/Iron Binding	Calculation: See information for Transferin	Beckman	mcg/dL	19+ years: 250-425	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	112-1,118	112-1,118
<b>Transferrin</b>	TRANB	In the procedure, the measurement of the decrease in light transmitted (increase in absorbance) through particles suspended in solution as a result of complexes formed during the antigen-antibody reaction, is the basis of the assay.	Beckman	mg/dL	200-400	N/A	Fundamentals of Clinical Chemistry, Tietz 4th ed; Verified by OSU/WMC Reference Interval Study 2021.	75-750	75-2,250
<b>Triglycerides</b>	TRIG	The glycerol is phosphorylated by adenosine triphosphate (ATP) in the presence of glycerol kinase (GK) to produce glycerol-3-phosphate. The glycerol-3-phosphate is oxidized by molecular oxygen in the presence of GPO (glycerol phosphate oxidase) to produce hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) and dihydroxyacetone phosphate. The formed H <sub>2</sub> O <sub>2</sub> reacts with 4-aminobenzotriazole and N-(5-(4-sulfobutyl)-3,5-dimethylamino, disodium salt (MADB)) in the presence of peroxidase (POD) to produce a chromophore, which is read at 660/800nm. The increase in absorbance at 660/800 nm is proportional to the triglyceride content of the sample.	Beckman	mg/dL	Desirable: <150 Borderline: 150-199 High: 200-499 Very High: ≥500	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP III) (Circulation, 2002;106:3143-3421)	10-1,000	10-10,000
<b>Triglycerides, Body Fluid</b>	FTRIG	See TG	Beckman	mg/dL	<b>Peritoneal:</b> Peritoneal fluid triglyceride values greater than 110 mg/dL have been suggested for diagnosis of chylous ascites. Measurement may also be useful in distinguishing cirrhotic versus malignant origins. <b>Plural:</b> Plural triglycerides <5.0 mg/dL excludes a chylothorax. Plural triglycerides > 110mg/dL supports a diagnosis of a chylothorax. <b>Urine:</b> The reference range has not been established for this fluid specimen. The fluid results should be compared with the concentration in serum/plasma or integrated into the clinical context for interpretation.	N/A	Plural: Staats BA, et al. Mayo Clin Proc. 1980;55(11):700. Peritoneal: Ringel D, et al. Hepatology, 1986;6(2):239.	10-1,000	10-10,000
<b>TSH</b>	Thyroid Stimulating Hormone, TSH High Sensitivity	The Aetelica IM TSH3-UL assay is a third-generation assay that employs anti-FITC monoclonal antibody covalently bound to paramagnetic particles, an FITC-labeled anti-TSH capture mouse monoclonal antibody, and a tracer consisting of a proprietary acridinium ester and an anti-TSH mouse monoclonal antibody conjugated to bovine serum albumin (BSA) for chemiluminescent detection.	Siemens	uIU/mL	18+ years: 0.550-4.780	Call abnormal ED only ≥150,000	Aetelica IM TSH3-UL Package Insert 11202198_EN Rev. 04-2021-03	0.008-150.000	0.008-150.000
<b>TSH w/ FT4 Reflex</b>	TSHQR	The Aetelica IM TSH3-UL assay is a third-generation assay that employs anti-FITC monoclonal antibody covalently bound to paramagnetic particles, an FITC-labeled anti-TSH capture mouse monoclonal antibody, and a tracer consisting of a proprietary acridinium ester and an anti-TSH mouse monoclonal antibody conjugated to bovine serum albumin (BSA) for chemiluminescent detection.	Siemens	uIU/mL	18+ years: 0.550-4.780	Call abnormal ED only ≥150,000	Aetelica IM TSH3-UL Package Insert 11202198_EN Rev. 04-2021-03	0.008-150.000	0.008-150.000
<b>Urea Nitrogen, 24 Hr Urine</b>	UREA	See BUN	Beckman	g/24hrs	10.0-20.0	N/A	Clinical Guide to Laboratory Tests, Tietz, 2012	N/A (Calculation)	N/A (Calculation)
<b>Uric Acid</b>	URICB, UA	Uric acid is converted by uricase to allantoin and hydrogen peroxide. Hydrogen peroxide reacts with 4-aminobenzotriazole (4-ABT) in the presence of N,N-bis(4-sulfobutyl)-3,5-dimethylamino, disodium salt (MADB) to produce a chromophore which is read bichromatically at 660/800 nm. The amount of dye formed is proportional to the uric acid concentration in the sample.	Beckman	mg/dL	19+ years: Female: 2.8-6.0 Male: 3.5-7.0	N/A	OSU/WMC Reference Range Study effective 12.11.2013; verified by OSU/WMC Reference Interval Study 2021. Pediatric Reference Ranges, Soldin, 1999	1.5-30.0	1.5-60.0
<b>Uric Acid (Spec Handling)</b>	N/A	Uric acid is converted by uricase to allantoin and hydrogen peroxide. Hydrogen peroxide reacts with 4-aminobenzotriazole (4-ABT) in the presence of N,N-bis(4-sulfobutyl)-3,5-dimethylamino, disodium salt (MADB) to produce a chromophore which is read bichromatically at 660/800 nm. The amount of dye formed is proportional to the uric acid concentration in the sample.	Beckman	mg/dL	19+ years: Female: 2.8-6.0 Male: 3.5-7.0	N/A	OSU/WMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	1.5-30.0	1.5-60.0
<b>Uric Acid, 24Hr</b>	URIC_24	See Uric Acid	Beckman	g/24hrs	0.3-0.8	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
<b>Uric Acid, Random, Urine</b>	URICR	See Uric Acid	Beckman	mg/dL	N/A	N/A	N/A	1.0-100.0	1.0-300.0
<b>Urine Calcium</b>	Calcium_Random Urine	See Calcium	Beckman	mg/dL	N/A	N/A	N/A	0.1-1.00	0.1-1.20
<b>Urine Urea Nitrogen - Random</b>	UREAR	See BUN	Beckman	mg/dL	N/A	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	20-1,300	20-13,000
<b>Vancomycin Level, Random</b>	VANCTR	Serum is mixed with Reagent 1, which contains vancomycin labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Subsequently, Reagent 2, which contains antibodies to vancomycin and the coenzyme nicotinamide adenine dinucleotide (NAD), is added. Vancomycin in the sample and vancomycin-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the vancomycin concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	Peak 20.0-40.0 Trough 10.0-20.0	25.1 Trough	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacotherapy, 1995; 15:85-91, Antimicrobial Stewardship Program, 2013	2.0-50.0	2.0-250.0
<b>Vancomycin Level, Trough (Pre Drug Level)</b>	VANCTR	Serum is mixed with Reagent 1, which contains vancomycin labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Subsequently, Reagent 2, which contains antibodies to vancomycin and the coenzyme nicotinamide adenine dinucleotide (NAD), is added. Vancomycin in the sample and vancomycin-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the vancomycin concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-20.0 (Therapeutic Range)	25.1 Trough	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacotherapy, 1995; 15:85-91, Antimicrobial Stewardship Program, 2013	2.0-50.0	2.0-250.0

Vancomycin Peak (Post Drug Level)	VANCPK	Serum is mixed with Reagent 1, which contains vancomycin labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Subsequently, Reagent 2, which contains antibodies to vancomycin and the coenzyme nicotinamide adenine dinucleotide (NAD), is added. Vancomycin in the sample and vancomycin-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the vancomycin concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured.	Beckman	mcg/mL	All: 20.0-40.0 (Therapeutic Range)	N/A	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacotherapy, 1995; 15:85-91	2.0-50.0	2.0-250.0
Vitamin B12	B12	Competitive immunoassay using direct chemiluminescent technology	Siemens	pg/mL	19+ years: 211-911	N/A	Atellica IM Vitamin B12 Package Insert 10995437_EN Rev. 02-2019-08; Pediatric Reference Ranges, Solinf, 1999	45-2,000	45-20,000
ADAMTS13 Activity and IgG Antibodies	AD13A	ELISA	Activity: VersaMax plate reader Technorm kit IgG Antibodies: VersaMax plate reader, Technorm kit	Activity: % IgG Antibodies: U/mL	Activity: ≥10% IgG Antibodies: ≤12.0 U/mL	N/A	Technorm kit	Activity: ≥1.00% IgG Antibodies: 6.0-104.0 U/mL	Activity: ≥1.00% IgG Antibodies: 6.0-104.0 U/mL
Alternative Activation Pathway	IB Complement	ELISA	VersaMax Plate Reader, Quidel kit	ng/mL	695-1,974	N/A	Biomarker Reference Lab	See Quidel kit values (lot number specific)	See Quidel kit values (lot number specific)
EM Platelet (Electron Microscopy)	Tissue Exam	Whole mount	N/A	dg/plt	3.68-6.24	N/A	Old journal articles; lab derived	N/A	N/A
SC5b-9 Complement	Terminal Activation Pathway	ELISA	VersaMax Plate Reader, Quidel kit	ng/mL	6-598	N/A	Biomarker Reference Lab	See Quidel kit values (lot number specific)	See Quidel kit values (lot number specific)
Anti-Cardiolipin Ab, IgG	ACA: ACL; APA: Anti-Phospholipid Antibody IgG	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isotinol as the chemiluminescent molecule	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-500.0	10.0-10,000.0
Anti-Cardiolipin Ab, IgM	ACA: APA; ACL: Anti-Phospholipid Antibody IgM	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isotinol as the chemiluminescent molecule	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-200.0	10.0-4,000.0
Antifibrinogen	AT	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm. This is a two step thrombin neutralization process	Stago	%	17+ years: 85-118	N/A	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol. Vol 12, 85-104; Andrew, 1990	See Stago Unicalibrator assayed values (lot number specific)	9-200
Anti Xa DOAC (Apixaban)	Apixaban, DOAC, Elixquis	Chromogenic measurement system consisting of a beam of monochromatic light at 405 nm.	Stago	ng/mL		N/A	1. Package insert: Apixaban; Diagnostica Stago, Revised January 2015 2. Harst KV, O'Callaghan JM, Handa A: Quick reference guide to apixaban. Vaac Health Risk Manag 2015; 13:263-267 3. Granger CB, Alexander JH, McMurray JJ, et al: Apixaban versus warfarin in patient with atrial fibrillation. N Engl J Med 2011;365:981-992 4. Frost C, Nepal S, Wang J, et al: Safety, pharmacokinetics and pharmacodynamics of multiple oral doses of apixaban, a factor Xa inhibitor, in healthy subjects. Br. J. Clin. Pharmacol 2013;76 (5):776-786 5. Agnelli G, Buller H, Cohen A, et al: Oral apixaban for the treatment of acute venous thromboembolism. N Engl J Med 2013;369:799-808 6. Siegel DM, Curran JT, Connolly SJ, et al: Andexanet alfa for reversal of factor Xa inhibitor activity. N Engl J Med 2015;373:2413-2424 7. Martin K, Beyer-Westendorf J, Davidson BL, et al: Use of the direct oral anticoagulants in obese patients: guidance from the SSC of the ISTH. J Thromb Haemost 2016;14:1308-1313	23-500	23-500
Anti Xa DOAC (Rivaroxaban)	Rivaroxaban, DOAC, Xarelto	Chromogenic measurement system consisting of a beam of monochromatic light at 405 nm.	Stago	ng/mL		N/A	Diagnostica Stago, Revised December 2014 2. Masek W, Stangor J, Kubacka D, Becka M: Clinical pharmacokinetic and pharmacodynamic profile of rivaroxaban. Clinical Pharmacokinetics 2014; 53(1):1-16. doi: 10.1007/s40262-013-0100-7 3. Bayer Pharma AG: Xarelto (rivaroxaban) Summary of Product Characteristics, 2013. Available at: www.ema.europa.eu/docs/en_GB/document_library/EPAR_-_Product_Information/human/0009944/WC50057108.pdf 4. EINSTEIN Investigators, Bauersachs R, Berkowitz SD, et al: Oral rivaroxaban for symptomatic venous thromboembolism. N Engl J Med 2010; 363:2499-510 5. EINSTEIN-PE Investigators, Buller HR, Prins MH, et al: Oral rivaroxaban for the treatment of symptomatic pulmonary embolism. N Engl J Med 2012; 366:1287-1297 6. Patel MR, Mahaffey KW, Garg J, et al: Rivaroxaban versus warfarin in nonvalvular atrial fibrillation. N Engl J Med 2011; 365:883-891 7. Siegel DM, Curran JT, Connolly SJ	25-500	25-500
Anti Xa LMWH (Enoxaparin) 4 Hr Post	Anti-Xa for LMWH Peak Dose, AXMLPK	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	Anti-Xa IU/mL	0.60-1.00 (Therapeutic Range applies to 4 hour post dose collection)	N/A	Chest, vol. 119, issue 1, January 2001, pp. 645-75S.	0.10-1.60	0.10-1.60
Anti Xa LMWH (Enoxaparin) Random	Anti-Xa for low molecular weight heparin	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	Anti-Xa IU/mL	0.60-1.00 (Therapeutic Range applies to 4 hour post dose collection)	N/A	Chest, vol. 119, issue 1, January 2001, pp. 645-75S.	0.10-1.60	0.10-1.60
Beta-2 Glycoprotein 1 Ab, IgG	Beta 2 Glycoprotein 1 IgG Antibody	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isotinol as the chemiluminescent molecule	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-500.0	10.0-10,000.0
Beta-2 Glycoprotein 1 Ab, IgM	B2GP1, IgM; Beta 2 Glycoprotein 1 IgM Antibody	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isotinol as the chemiluminescent molecule	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-200.0	10.0-4,000.0
Beta-2 Glycoprotein 1, Domain I	Beta2 GP1 Domain I, B2GP1 DmI, B2GP1 Domain 1, B2GP1 DmI	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isotinol as the chemiluminescent molecule	Inova	CU	0.0-19.9	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-200.0	10.0-2,000.0
D-Dimer, Quantitative	HSDDI	Immuno-turbidimetric - photometric measurement system consisting of a beam of monochromatic light at 540nm passing through a solution of antibody coated microplate particles	Stago	mcg/mL FEU	<0.50	N/A	OSU Lab Normal Range Study (08/2007)	0.27-4.00	0.27-20.00
DIC Workup	DIC Panel Includes: Plasclot Coam, PT, FTT, FIB, TT, D-Dimer, F1T/T Mixing Studies (as appropriate) and Pathologist Interpretation	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Dilute Russell Venom Time	DRVVT	Mechanical Clot Detection	Stago	Ratio	Screen ratio: ≤1.19 Normalized ratio: ≤1.31	N/A	OSUWMC, in-house reference range study performed yearly	N/A	N/A
Factor II Activity	Prothrombin Activity, FA2	Mechanical Clot Detection	Stago	% Activity	17+ years: 60-150	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-500
Factor IX Activity	Christmas Factor, FA9	Mechanical Clot Detection	Stago	% Activity	17+ years: 77-147	<5	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	1-500
Factor IX Inhibitor	Factor IX Antibody, FAC9AB	Mechanical Clot Detection Bethesda Assay	Stago	Bethesda units	Negative (0.0 Bethesda units)	N/A	N/A	N/A	0.0 - dilute to endpoint
Factor V Activity	Labile Factor, FA5	Mechanical Clot Detection	Stago	% Activity	17+ years: 50-150	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-500
Factor VII Activity	FA7	Mechanical Clot Detection	Stago	% Activity	17+ years: 65-135	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-1000
Factor VIII Activity	Anti Hemophilic Factor, FA8	Mechanical Clot Detection	Stago	% Activity	17+ years: 75-220	<5	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	1-500
Factor VIII Inhibitor Assay	Factor VIII Antibody	Mechanical Clot Detection Bethesda Assay	Stago	Bethesda units	Negative (0.0 Bethesda units)	N/A	N/A	N/A	0.0 - dilute to endpoint

Factor X Activity	Stuart Power Factor, FA10	Mechanical Clot Detection	Stago	% Activity	17+ years: 60-130	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005; Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicabibrator assayed values (lot number specific)	3-500	
Factor XI Activity	Hemophilia C, FA11	Mechanical Clot Detection	Stago	% Activity	17+ years: 65-135	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998-2005; Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicabibrator assayed values (lot number specific)	1 - 500	
Factor XIII Activity	Fibrin Stabilization Factor, FA13	Solubility	N/A	N/A	Present	N/A	N/A	N/A	Present	Absent
Fibrinogen, Clottable	FB				220-410	<75	OSU Lab Normal Range Study (05/2003)			
Fibrinogen, Obstetrical	FB, OB	Mechanical Clot Detection	Stago	mg/dL	First Trimester: 244-510 mg/dL Second Trimester: 291-538 mg/dL Third Trimester: 373-619 mg/dL OB Patient Comment: Fibrinogen levels may be altered by the normal physiologic changes of pregnancy and should be interpreted considering reference ranges specific to gestational age.	≤200	OB Patient Comment: Reference: Abbassi-Ghanayem M, Greer LL, Cunningham PG. Pregnancy and laboratory studies: a reference table for clinicians. Obstet Gynecol 2009; 114:1326.	60-900	60-900	
Heparin Anti-Xa Unfractionated	HEPAS	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	IU/mL	0.30-0.70	(Therapeutic Range: applies to 4 hour post low collection)	N/A	Chest, vol. 119, issue 1, January 2001, pp. 645-75S.	0.10-0.80	0.10-1.60
Heparin Platelet Factor 4 (HIT Screen) With Reflex To SRA	PF4GCP	ELISA, IgG	Immucor	O.D., % Heparin Inhibition	0.0 - 0.400	Heparin Inhibition <50%	N/A	Immucor LIFECODES® PF4 IgG Assay Package Insert	0.000-1.000	0.000-3.000
Hexagonal PL Neutralization	Hexagonal PL Neutralization: STACLOT-LA	Mechanical Clot Detection	Stago	sec	<9.5	N/A	OSUWMC, in-house reference range study performed yearly	N/A	N/A	≤0.0
INR	N/A	Calculated from PT value, the ISI and the geometric mean value of the PT normal reference range.	Stago	(ratio)	Oral Anticoagulant Therapy Target Ranges: Standard Therapy 2.0-3.0 High Dose 2.4-3.4	INR >4.9	OSUWMC in-house reference range, verified yearly	0.5 - 14.8	0.5 - 14.8	
Lupus Anticoagulant	Lupus Workup Package includes PT, INR, TT, DRVVT Screen, PTT-LA, Mixing Studies, DRVVT Confirm and/or Hexagonal Phase Phospholipid Neutralization (as appropriate)	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Platelet Aggregation	N/A	Platelet aggregation / turbidimetric measurement of a solution.	Helena	% Aggregation	ADP 4.5 microMOL/L: 64.8-112.4 ADP 10 microMOL/L: 78.3-104.8 Arachidonic Acid 1.64 mM: 78.5-104.6 Collagen 2 mg/mL: 74.1-105.4 Collagen 10 mg/mL: 74.1-105.4 Epinephrine 1.0 microMOL/L: 75.9-103.9 Ristocetin 1.5 mg/mL: 83.4-101.6 Ristocetin 0.5 mg/mL: 80.0-144.0 Thromboxane Analogue U46619, 2.0 microMOL/L: 78.1-103.4	N/A	OSUWMC In-house Reference Range Study (03-2015)	N/A	N/A	
Platelet Function Test	Platelet Function Assay, PFA	Instrument PFA-100 Closure Time: The time measured from the start of the test until a platelet to close aperture after exposure to agonist	Siemens	sec	Collagen/Epinephrine: 73-172 Collagen/ADP: 53-111 Platelet function interpretation: Normal Function	N/A	OSU Normal Range Study (07/2004)	31-300	31-300	
Platelet P2Y12 Inhibition Test	P2Y12 Inhibition Test: Verify Now PRU Test	Platelet Aggregation is a self-contained test device	Verify Now	PRU	194 - 418	N/A	Accumetris, verified at OSU	1-999	1-999	
Protein C Activity	PROTC	Mechanical Clot Detection	Stago	% Activity	17+ years: 72-220	N/A	Accumetris, verified at OSU	See Stago Unicabibrator assayed values (lot number specific)	10-300	
Protein S Activity	PROTS	Mechanical Clot Detection	Stago	% Activity	17+ years: 50-168	N/A	OSU Inhouse Study: Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol, Vol 12, 95-104, Andrew, 1990	See Stago Unicabibrator assayed values (lot number specific)	10 - 300	
PT	Protine-INR	Mechanical Clot Detection	Stago	sec	11.9 - 14.2	N/A	OSUWMC in-house reference range, verified yearly	7.0 - 109.0	7.0 - 109.0	
PT and PT Mixing Study	Prothrombin Time Mixing Study Protine Mixing Study	Mechanical Clot Detection	Stago	sec	N/A	N/A	N/A	N/A	N/A	
PT Mix w/ Normal Plasma	N/A	Mechanical Clot Detection	Stago	sec	N/A	N/A	N/A	See PT Test	See PT Test	
PTT	APTT	Mechanical Clot Detection	Stago	sec	24.0-34.3	Inpatient: >150.0 Outpatient: >60.0	OSUWMC, in-house reference range study performed yearly	20.0 - 180.0	20.0 - 180.0	
PTT Mix w/ Normal Plasma	N/A	Mechanical Clot Detection	Stago	sec	N/A	N/A	N/A	See PTT Test	See PTT Test	
PTT with Mixing Study	N/A	Mechanical Clot Detection	Stago	sec	N/A	N/A	N/A	See PTT Test	See PTT Test	
PTT-LA	LA, PTT; PTT - Lupus Sensitive, Includes PTT-LA Mixing Study	Mechanical Clot Detection	Stago	sec	≤43.9	N/A	OSUWMC, in-house reference range study performed yearly	20.0-180.0	20.0-180.0	
Ristocetin CoFactor	Von Willebrand Factor Activity	Platelet Agglutination Light Transmittance Aggregometry	Helena	% Activity	40-200	N/A	OSU Normal Range Study	See Helena SARP calibrator assayed value (lot number specific)	13-400	
Thrombin Time	Thrombin Clotting Time	Mechanical Clot Detection	Stago	sec	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0	
TT Mix w/ Normal Plasma	N/A	Mechanical Clot Detection	Stago	sec	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0	
(Not individually orderable. Order Lupus Anticoagulant Workup)	Thrombin Clotting Time	Mechanical Clot Detection	Stago	sec	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0	
TT Mix w/ Protamine Sulfate	Thrombin Time with Heparin Neutralization	Mechanical Clot Detection	Stago	sec	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0	
(Not individually orderable. Order Lupus Anticoagulant Workup)	Thrombin Time with Heparin Neutralization	Mechanical Clot Detection	Stago	sec	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0	
Von Willebrand Battery Ag + Factor VIII	Von Willebrand Workup includes: PTT, Factor VIII, VWF Antigen, Ristocetin CoFactor, and a Von Willebrand Multimeric (as applicable)	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	
Von Willebrand Factor Ag	VWFAG	Immunoturbidimetric photometric measurement system consisting of a beam of monochromatic light at 540nm passing through a solution of antibody coated microlatex particles.	Stago	%	17+ years: 50-180	N/A	OSU Inhouse Study: Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago VWF: Ag Calibrator assayed value (lot number specific)	3-400	
Band Neutrophils	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0	
Band Band + Seg Ratio	BANDR	Calculations: BANDS/(Segs+BANDS)	N/A	N/A	N/A	≥0.25 (Neutrons)	N/A	0.00-1.00	0.00-1.00	
Basophil Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100	
Basophil %	N/A	Flow Cytometry Manual differential	Synex	%	N/A	N/A	N/A	0-100.0	0.0-100.0	
Basophils Absolute	N/A	Calculation	Synex	x10 <sup>9</sup> /uL	≥18 years: Male: 0.00-0.09 Female: 0.00-0.15	N/A	OSU Internal Normal Range Study, October 2018 Seldin, Steven J. Pediatric Reference Intervals. 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result	
Basophils Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100	
Blast Absolute	N/A	Calculation	N/A	-OR-	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result	
Blasts	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0	
Blasts Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100	
Blasts Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100	
Body Fluid Cell Count	N/A	Hemocytometer Counts / Iris instrument	CCL, Irs RRL, N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	
Body Fluid Cell Count with DIF	Body Fluid Battery	Hemocytometer Counts / Iris instrument/ Manual Differential	CCL, Irs RRL, N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	
Bone Marrow Collection (Asst)	N/A	Manual	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CBC, EDIF, Platelet	CBC, Electronic DIF with Platelets	See individual analytes	Synex	Varies	Varies	Varies	Varies	Varies	Varies	
CBC, Platelets	Complete Blood Count, Hemogram	See individual analytes	Synex	Varies	Varies	Varies	Varies	Varies	Varies	

Cell Count & Diff, CSF, CSF Differential/Path Interpretation	Spinal Fluid Cell Count and Differential	Hemocytometer Counts / Iris instrument/ Manual Differential	CCL Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
<b>Crystals, Fluid</b>	N/A	Unstained synovial fluid slides reviewed by polarized microscope	N/A	N/A	Negative	N/A	N/A	N/A	Positive / Negative
<b>CSF Fluid Count Only</b>	Spinal Fluid Cell Count	Hemocytometer Counts / Iris instrument	CCL Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
<b>Eosinophils %</b>	N/A	Flow Cytometry/ Manual differential	Synex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Eosinophils Absolute</b>	N/A	Calculation	Synex	x10 <sup>3</sup> /ul	≥18 years: Male: 0.00-0.48 Female: 0.00-0.42	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
<b>Eosinophils Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Eosinophils Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Extended Reticulocyte Panel</b>	Panel includes: Ret%, Retf, IRF and RET-HE	Flow Cytometry, Calculation	Synex	Varies	Varies	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Varies	Varies
<b>Hairy Cells</b>	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
<b>Hairy Cells Absolute</b>	N/A	Calculation	N/A	OR- K/ul	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
<b>Hematocrit</b>	HCT	Cumulative Pulse Height Detection	Synex	%	≥18years: Male: 39.6-48.8 Female: 34.9-44.3	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.1-75.0	0.1-dilute to obtain numeric result
<b>Hematocrit, Fluid</b>	Fluid HCT, Fluid PCV	Manual Spin Hemocrit	N/A	%	N/A	N/A	N/A	5.0-60.0	5.0-60.0
<b>Hemoglobin</b>	HGB	Photometrically measured	Synex	g/dL	≥18years: Male: 13.4-16.8 Female: 11.4-15.2	<7.0 and >22.0 8.4-12.2; <8.0 and >22.0 04-74 <11.0 and >22.0	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.2-26.0	0.2-dilute to obtain numeric result
<b>Immature Granulocytes %</b>	N/A	Flow Cytometry	Synex	%	N/A	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.0-100.0	0.0-100.0
<b>Immature Granulocytes Absolute</b>	IG	Calculation	Synex	OR- K/ul	≥18 years: Male: ≥0.07 Female: ≥0.08	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00	Electronic: 0.04-dilute to obtain numeric result
<b>Immature Platelet Fraction</b>	IPF	Calculation	Synex	%	≥18 years: Male: 0.0-0.0 Female: 0.0-8.6	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.0-100.0	0.0-100.0
<b>Immature Reticulocyte Fraction</b>	IRF	Calculation	Synex	%	≥18 years: Male: 0.2-16.3 Female: 1.1-16.2	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.0-100.0	0.0-100.0
<b>Lymphocytes Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	<3m: 35-50 >3m: 40-80	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0-100	0-100
<b>Lymphocytes %</b>	N/A	Flow Cytometry/ Manual differential	Synex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Lymphocytes Absolute</b>	N/A	Calculation	Synex	OR- K/ul	≥18 years: Male: 0.83-3.57 Female: 1.16-3.51	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
<b>Lymphocytes Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Lymphoma Cells</b>	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
<b>Lymphoma Cells Absolute</b>	N/A	Calculation	N/A	OR- K/ul	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
<b>Lymphoma Cells Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Lymphoma Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Malaria Prep</b>	Parasite Screen / ID Blood, MPB	Giemsa Stain	N/A	N/A	NOPO - No parasite organism seen, including plasmodium organisms	N/A	N/A	N/A	No parasitic organism seen, including plasmodium organism / Positive for Plasmodium species
<b>Malignant Cells Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Malignant Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Manual Retc</b>	N/A	Manual/Miller Disk	N/A	%	≥18 years: Male: 0.68-2.64 Female: 0.74-2.54	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.25-30.00	0.25-30.00
<b>MCH</b>	Red Cell Indices	HGB x 10/RBC	Synex	pg	≥18 years: Male: 26.1-33.3 Female: 25.2-33.9	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	N/A	N/A
<b>MCHC</b>	Red Cell Indices	HGB x 100/HCT	Synex	g/dL	≥18 years: Male: 31.9-36.5 Female: 31.4-35.9	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	N/A	N/A
<b>MCV</b>	Red Cell Indices	HCT x10/RBC	Synex	fL	≥18 years: Male: 79.0-94.5 Female: 79.6-97.7	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	N/A	N/A
<b>Mesothelial Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Metamyelocytes</b>	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Metas Absolute</b>	N/A	Calculation	N/A	OR- K/ul	≥18 years: Male: ≥0.07 Female: ≥0.08	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
<b>Monocytes %</b>	N/A	Flow Cytometry/ Manual differential	Synex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Monocytes / Macrophages Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	<3m: 50-90 >3m: 15-45	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0-100	0-100
<b>Monocytes / Macrophages Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Monocytes Absolute</b>	N/A	Calculation	Synex	OR- K/ul	≥18 years: Male: 0.24-0.93 Female: 0.22-0.87	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
<b>MPV</b>	N/A	Derived from the PLT histogram.	Synex	fL	≥18 years: Male: 8.7-12.3 Female: 8.5-12.2	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	N/A	N/A
<b>Myelocytes</b>	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Myelos Absolute</b>	N/A	Calculation	N/A	OR- K/ul	≥18 years: Male: ≥0.07 Female: ≥0.08	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
<b>Neutrophils %</b>	N/A	Flow Cytometry/ Manual differential	Synex	%	N/A	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.0-100.0	0.0-100.0
<b>Neutrophils Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	<3m: 0-8 >3m: 0-6	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0-100	0-100
<b>Neutrophils Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>NRBC</b>	N/A	Flow Cytometry	Synex	/100 WBC	≥18 years: ≥0.2	N/A	Synex XN9000 EU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.0-600.0	0.0-600.0
<b>NRBC's Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Nucleated RBC's Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Other Cells</b>	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
<b>Other Cells Absolute</b>	N/A	Calculation	N/A	OR- K/ul	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
<b>Other Cells Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Other Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Peripheral Smear for Pick up by Physician for Review: Plasma Cells</b>	N/A	Manual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0

<b>Plasma Cells Absolute</b>	N/A	Calculation	N/A	x10 <sup>9</sup> /ul -OR- K/ul	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
<b>Plasma Cells Relative (CSF)</b>	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Plasma Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>Platelet Count</b>		Electronic Resistance Detection							
<b>Platelet Count - Fluorescent</b>	N/A	Flow Cytometry	Synex	x10 <sup>9</sup> /ul -OR- K/ul	≥18 years: Male: 146-337 Female: 150-393	<30 and >1,000 <b>Oncology:</b> <10 and >1,000	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	5-5,000	5-dilute to obtain numeric result
<b>Prolymphs</b>	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
<b>Prolymphs Absolute</b>	N/A	Calculation	N/A	x10 <sup>9</sup> /ul -OR- K/ul	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
<b>Promyelocytes</b>	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
<b>Promyelocytes Absolute</b>	N/A	Calculation	N/A	x10 <sup>9</sup> /ul -OR- K/ul	≥18 years: Male: 0.07 Female: 0.08	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
<b>RBC (CSF)</b>	Spinal fluid cell count	Hemocytometer Counts / Iris instrument	CCL-Iris RRL: N/A	/ul	All Ages: <3	N/A	Body Fluids 3rd ed. Kjelshog, Knight 1993	3-50,000	3-dilute to endpoint
<b>RBC Fluid</b>	Body fluid cell count	Hemocytometer Counts / Iris instrument	CCL-Iris RRL: N/A	/ul	N/A	N/A	N/A	3-50,000	3-dilute to endpoint
<b>RDW</b>	Red Cell Indices	Derived from RBC histogram. Representative of CV% of the histogram	Synex	%	≥18 years: Male: 10.8-14.3 Female: 10.8-14.9	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
<b>Red Blood Cell Count</b>	RBC	Electronic Resistance Detection	Synex	x10 <sup>9</sup> /ul -OR- M/ul	≥18 years: Male: 4.38-5.83 Female: 3.91-5.04	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.05-8.60	0.05-dilute to obtain numeric result
<b>Retic Absolute</b>	N/A	Calculation: Ret% x RBC	Synex	x10 <sup>9</sup> /ul -OR- M/ul	<b>Automated:</b> ≥18 years: Male: 0.0317-0.1377 Female: 0.0324-0.1142 <b>Manual:</b> ≥18 years: Male: 0.0317-0.1377 Female: 0.0324-0.1142	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	<b>XX:</b> 0.0100-0.7200 <b>XXL:</b> 0.0100-0.4576 <b>Manual:</b> 0.0000-8.6000	<b>XX:</b> 0.0100-dilute to obtain numeric result <b>XXL:</b> 0.0100-dilute to obtain numeric result <b>Manual:</b> 0.0000-dilute to obtain numeric result
<b>Retic Count</b>	N/A	Flow Cytometry	Synex	%	≥18 years: Male: 0.68-2.64 Female: 0.74-2.54	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.25-30.00	0.25-30.00
<b>Retic HGB Equivalent</b>	RET-HB	Calculation	Synex	pg	≥18 years: Male: 29.9-38.7 Female: 28.8-39.9	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
<b>Sedimentation Rate, Automated</b>	ESR	Photometric Rheology	Alcor	mm/hr	<b>Male:</b> ≥85Y: <50 50-85Y: <20 0-49Y: <15 <b>Female:</b> ≥85Y: <42 50-85Y: <30 0-49Y: <20	N/A	JB Henry, <i>Clinical Diagnosis &amp; Management</i> , 19th Ed., 1996, pg. 1460	1-130	1-130
<b>Segs + Bands Absolute</b>	ANC	Calculation: WBC x (NE% + Bands%)	Synex	x10 <sup>9</sup> /ul -OR- K/ul	≥18 years: Male: 1.57-6.19 Female: 1.64-7.28	N/A	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
<b>Sperm pH</b>	YFER, YSEMB	pH paper	N/A	N/A	>7.0 Refer to Mayo	N/A	WHO Laboratory manual for the Examination and Processing of Human Semen, 5th Ed.	5.0-10.0 Refer to Mayo	5.0-10.0 Refer to Mayo
<b>Synovasure PHL Synovial Fluid</b>	Synovasure Alpha Defensin Lateral Flow Test	Qualitative, visually read immunochromatographic assay for the detection of human host response proteins, Alpha Defensin 1-3, in the synovial fluid of adults with a total joint replacement who are being evaluated for revision surgery.	CD Diagnostics, Inc	N/A	Negative	N/A	Package Insert	N/A	Positive/Negative
<b>Synovial Lining Cells Relative (Fluid)</b>	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
<b>TNC (CSF)</b>	Spinal fluid cell count	Hemocytometer Counts / Iris instrument	CCL-Iris RRL: N/A	/ul	<1Y: <31 1-4Y: <21 ≥5Y: <6	≥41	Body Fluids 3rd ed. Kjelshog, Knight 1993	3-2,500	3-dilute to endpoint
<b>TNC Fluid</b>	Body fluid cell count	Hemocytometer Counts / Iris instrument	CCL-Iris RRL: N/A	/ul	N/A	N/A	N/A	3-2,500	3-dilute to endpoint
<b>White Blood Count</b>	WBC	Flow Cytometry	Synex	x10 <sup>9</sup> /ul -OR- K/ul	≥18 years: Male: 3.73-10.10 Female: 3.90-11.10	<1.50 and >35.00 <b>Oncology:</b> <0.50 and >35.00	OSU Internal Normal Range Study, October 2018 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.30-440.00	0.30-dilute to obtain numeric result
<b>Urine Screen</b>	Urine dipstick	Various	Siemens Clinitek	N/A	N/A	Various	Various	Various	Various
<b>Bacteria</b>	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000) and iQ200	CCL: Synex or Beckman RRL, James, MMPP, SSCBC: N/A	N/A	Absent	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Microscopic: Absent, Trace, Present CCL: Absent (0-499/uL), Trace (500-1199/uL), Present (≥1200/uL) iQ200: Absent, Trace, Present
<b>Blood Urine</b>	N/A	The peroxidase-like activity of hemoglobin catalyzes the reaction of diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine to produce a color from orange to brown.	Siemens Clinitek	NA	Negative Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Trace, Small, Moderate, Large
<b>Appearance</b>	Clarity	CCL measuring the transmission and scattering of light that passes through the specimen.	CCL: Siemens Clinitek Novus James, RRL, MMPP, SSCBC: N/A RRL, James, MMPP, SSCBC: Manual	N/A	Clear	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Clear, Cloudy, Turbid
<b>Color</b>	N/A	Manual and reflectance spectrophotometer	CCL: Siemens Clinitek Novus James, RRL, MMPP, SSCBC: N/A	N/A	Yellow	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Yellow, Orange, Red, See Comment
<b>Glucose Urine</b>	N/A	Glucose oxidase catalyzes the breakdown of glucose into gluconic acid and hydrogen peroxide. CCL: This test is based on a double sequential enzyme reaction. One enzyme, glucose oxidase, catalyzes the formation of gluconic acid and hydrogen peroxide from the oxidation of glucose. A second enzyme, peroxidase, catalyzes the oxidative coupling of 4-aminoantipyrine and 4-methylcatechol by hydrogen peroxide. RRL, James, MMPP, SSCBC: Peroxidase catalyzes the reaction of hydrogen peroxide with a potassium iodide chromogen to oxidize the chromogen to colors ranging from green to brown.	Siemens Clinitek	mg/dL	Negative Manufacturer's sensitivity level is 75-125 mg/dL	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, 100, 250, 500, ≥1000
<b>Ketones Urine</b>	N/A	Acetoacetic acid reacts with nitroprusside to produce a mazon color.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity level is 5-10 mg/dL acetoacetic acid	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Trace, Small (15 mg/dL), Moderate (40 mg/dL), Large (280 mg/dL), Unable to analyze due to interfering substance

Leucocyte Esterase	N/A	Esterases contained in granulocytes catalyze the hydrolysis of the derivatized pyrrole amino acid ester to liberate 3-hydroxy-5-phenyl pyrrole which then reacts with a diazonium salt to produce a purple color.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity is 5-15 white blood cells/hpf	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Trace, Small, Moderate, Large
Myoglobin Urine	Urine Myoglobin Screening	The peroxidase-like activity of hemoglobin catalyzes the reaction of diaminopyrimizene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine to produce a color from orange to green.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin and myoglobin	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Referred to Sendout
Nitrites Urine	N/A	At the acid pH of the reagent area, nitrite in the urine reacts with p-aminic acid to form a Diazotium compound which couples with 1,2,3,4-tetrahydrobenzo[ <i>b</i> ]quinolin-3-ol to produce a pink color.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity is 0.06-0.1 mg/dL nitrite ion	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Positive
Occult Blood, Fecal-Immunological	FOOB	Immunological Fecal Occult Blood Test is a rapid, immunoassay for the rapid qualitative detection of human hemoglobin (HGB) in feces.	Hemasure	N/A	Negative	N/A	N/A	N/A	Negative, Positive
Occult Blood, Gastric	Gastrocult	Developing solution (stabilized mixture of hydrogen peroxide and denatured alcohol) creates a reaction between hemoglobin and guaiac to produce a blue color.	Gastrocult Beckman	N/A	Negative	N/A	N/A	N/A	Negative, Positive
Occult Blood, Stool	Occult Blood, Fecal Hemoccult	Developing solution (stabilized mixture of hydrogen peroxide and denatured alcohol) creates a reaction between hemoglobin and guaiac to produce a blue color.	Hemoccult Beckman	N/A	Negative	N/A	N/A	N/A	Negative, Positive
pH Urine	N/A	Double indicator principle to cover the range of urinary pH range. Colors range from orange through yellow and green to blue.	Siemens Clinitek	N/A	5.0-7.0	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	CCL, RRL, James: 5.0 - 5.0 SSCBC, MMMP: 5.0 - >8.5
Protein Urine	N/A	Based on the protein-error-of-indicators principle where at a constant pH, the development of any green color is due to the presence of protein.	Siemens Clinitek	mg/dL	Negative Manufacturer's sensitivity is 15-30mg/dL albumin	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Negative, Trace, 30mg/dL, 100mg/dL, >300mg/dL
RBC Casts	RBC Casts	Microscopic Examination of Urine Sediment and Q200	CCL: Beckman RRL, James, MMMP, SSCBC: N/A	/hpf	0	Any seen	Urinalysis and Body Fluid, Ringrad 1995	N/A	When reported: Rare, 1-2, 3-5, 6-9, 10-20, >20
RBC Urine	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000) and Q200	CCL: Symes or Beckman RRL, James, MMMP, SSCBC: N/A	/hpf	0-2	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	0-2, 3-5, 6-9, 10-20, >20
Specific Gravity Urine	N/A	CCL: Fiber optic refractive index method RRL, James, MMMP, SSCBC: pKa change of pretreated polyelectrolyte in relation to ionic concentration	Siemens Clinitek	N/A	1.001-1.035	N/A	Urinalysis and Body Fluid, Ringrad 1995	CCL Clinitek Novus: 1.001-1.045 CCL, RRL, James, SSCBC, MMMP Clinitek Advantus>Status: <math>\leq 1.005, 1.010, 1.015, 1.020, 1.025, \ge 1.030</math>	CCL Clinitek Novus: 1.001-1.045 CCL, RRL, James, SSCBC, MMMP Clinitek Advantus>Status: <math>\leq 1.005, 1.010, 1.015, 1.020, 1.025, \ge 1.030</math>
Squamous/Epithelial Cells	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000) and Q200	CCL: Symes or Beckman RRL, James, MMMP, SSCBC: N/A	/hpf	Absent 1/hpf (1+) 2-5/hpf (2+)	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Absent 1/hpf (1+) 2-5/hpf (2+) 6-8/hpf (3+) >8/hpf (4+)
Trichomonas	N/A	Microscopic Examination of Urine Sediment and Q200	CCL: Beckman RRL, James, MMMP, SSCBC: N/A	N/A	Absent	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	When reported: Absent, Present
Urinalysis	U/A with Microscopic	Various	Siemens Clinitek, Symes and/or Beckman	N/A	Various	Various	Various	Various	Various
Urinalysis Reflex to Culture	UTI workup for general population	Various	Siemens Clinitek, Symes and/or Beckman	N/A	Various	Various	Various	Various	Various
Urine Dipstick with Reflex Microscopy	UASR	Various	Siemens Clinitek, Symes and/or Beckman if it is Positive	N/A	Various	Various	Various	Various	Various
Urobilinogen Urine	N/A	Ehrlich Reaction, in which p-diethylaminobenzaldehyde in conjunction with a color enhancer reacts with urobilinogen in a strongly acid medium to produce a pink-red color.	Siemens Clinitek	E.U./dL	0.2, 1.0	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	0.2, 1.0, 2.0-4.0, >8.0
WBC Casts	N/A	Microscopic Examination of Urine Sediment and Q200	CCL: Beckman RRL, James, MMMP, SSCBC: N/A	/hpf	0	Any seen	Urinalysis and Body Fluid, Ringrad 1995	N/A	When reported: Rare, 1-2, 3-5, 6-9, 10-20, >20
WBC Urine	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000) and Q200	CCL: Symes and Beckman RRL, James, MMMP, SSCBC: N/A	/hpf	0-5	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	0-5, 6-9, 10-20, >20
Yeast/Fungi	N/A	Microscopic Examination of Urine Sediment and Q200	CCL: Beckman RRL, James, MMMP, SSCBC: N/A	N/A	Absent	N/A	Urinalysis and Body Fluid, Ringrad 1995	N/A	Absent, Present
Acetone, Blood	N/A	GC-EFD	Anilent GC	mc/dL	<math>\le 10</math>	>10	OSU	10-400	10-400
Amikacin Level, Trough (Pre Dose Level)	N/A	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Range <math>< 6.0</math>	>6.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amikacin Level, Peak (Post Dose Level)	N/A	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Range 30.0-60.0	>60.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amikacin Level, Random	Amikin	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Peak: 30.0-60.0 Trough: <math>< 6.0</math>	>60.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amphetamine, Urine, Confirmation	Amphetamine, methamphetamine, adderal	LC/MS/MS	Agilent QQQ 6420	ng/mL	<math>< 25</math> ng/mL	N/A	N/A	Amphetamine: 25-5000 ng/mL Methamphetamine: 25-5000 ng/mL Amphetamines Interpretation: Positive or None Detected (Positive if 1 or more drugs detected)	25-25,000 ng/mL
Amphetamine / Methamphetamine	Amphetamines Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Amphetamines Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 500 ng/mL	N/A
Amphetamine/Methamphetamine, Meconium	Amphetamines Screen - Meconium	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Amphetamines Assay	Negative / Presumptive Positive. Confirmation to Follow.	Negative	N/A	N/A	Cutoff: 1000 ng/g	N/A
Amphetamines, Meconium, Confirmation	N/A	LC/MS/MS	SCIEX 3200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff Amphetamine: 100 ng/g Methamphetamine: 100 ng/g	N/A
Barbiturates	Barbiturates Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Barbiturate Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 200 ng/mL	N/A
Barbiturates Screen, Serum	N/A	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Thermo Scientific DRI Barbiturate Serum Test Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 1000 ng/mL	N/A
Barbiturate Confirmation, Urine	N/A	GC-MS	Agilent GC/MS	None Detected / Positive	None Detected	N/A	N/A	Cutoff Amobarbital: 200 ng/mL Butalbital: 200 ng/mL Barbitabital: 200 ng/mL Pentobarbital: 200 ng/mL Phenobarbital: 200 ng/mL Secobarbital: 200 ng/mL	N/A
Barbiturates, Meconium		Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Barbiturate Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 400 ng/g	N/A
Barbiturates, Umbilical Cord		Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Barbiturate Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 200 ng/mL	N/A
Benzodiazepines	Benzodiazepines Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Benzodiazepine Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 200 ng/mL	N/A
Benzodiazepine, Meconium		Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Benzodiazepine Assay	Negative / Presumptive Positive. Confirmation to Follow.	Negative	N/A	N/A	Cutoff: 400 ng/g	N/A
Benzodiazepine Confirmation, Meconium	N/A	LC/MS/MS	SCIEX 3200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff Alprazolam: 25 ng/g alpha-hydroxyalprazolam: 125 ng/g 7-aminoclonazepam: 50 ng/g Diazepam: 120 ng/g Midazolam: alpha-hydroxymidazolam Nortriazepam: 50 ng/g Lorazepam: 200 ng/g Oxazepam: 100 ng/g Temazepam: 50 ng/g	N/A

<b>Benzodiazepines, Urine, Confirmation</b>	N/A	LC/MS/MS	SCIEX 1200 QTRAP	None Detected; 7-Aminoclonazepam; 7-Amino-flunitrazepam; Alpha-hydroxyalprazolam; Alpha-hydroxymidazolam; Alprazolam; Chloridiazepoxide; Clonazepam; Diazepam; Flunitrazepam; Flurazepam; Lorazepam; Midazolam; Nordiazepam; Oxazepam; Temazepam; Triazolam	None Detected	N/A	N/A	Cutoff 7-aminoclonazepam: 200 ng/mL 7-Aminoflunitrazepam: 25 ng/mL Alpha-hydroxyalprazolam: 400 ng/mL Alpha-hydroxymidazolam: 200 ng/mL Alprazolam: 50 ng/mL Chloridiazepoxide: 50 ng/mL Clonazepam: 200 ng/mL Diazepam: 100 ng/mL Flunitrazepam: 100 ng/mL Flurazepam: 50 ng/mL Lorazepam: 100 ng/mL Midazolam: 200 ng/mL Nordiazepam: 100 ng/mL Oxazepam: 200 ng/mL Temazepam: 100 ng/mL Triazolam: 100 ng/mL	N/A
<b>Buprenorphine</b>	Buprenorphine Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Buprenorphine Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 5 ng/mL	N/A
<b>Buprenorphine, Meconium</b>	Suboxone	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Buprenorphine Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 10 ng/g	N/A
<b>Buprenorphine/Norbuprenorphine, Urine, Confirmation</b>	Suboxone, Buprenorphine metabolite	LC/MS/MS	Agilent QQQ 6420	ng/mL	< 5.0 ng/mL	N/A	N/A	Buprenorphine: 5.0 - 5,000.0 ng/mL Norbuprenorphine: 5.0 - 5,000.0 ng/mL	Buprenorphine: 5.0 - 25,000.0 ng/mL Norbuprenorphine: 5.0 - 25,000.0 ng/mL
<b>Cannabinoids (Marijuana)</b>	THC Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Cannabinoid Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 50ng/mL	N/A
<b>Cannabinoids, Meconium</b>	THC Screen meconium, marijuana screen	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Cannabinoid Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 100 ng/g	N/A
<b>Cannabinoids, Umbilical Cord</b>	THC Screen meconium, marijuana screen	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Cannabinoid Assay	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 20 ng/mL	N/A
<b>Carboxy THC, Urine, Confirmation</b>	N/A	GC/MS	Agilent GC/MS	ng/mL	< 5.0 ng/mL	N/A	N/A	5.0-500.0 ng/mL	5.0-500.0 ng/mL
<b>Cocaine</b>	Cocaine Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Cocaine Metabolite Assay	Negative / Presumptive Positive / Presumptive Positive. Confirmation to follow.	Negative	N/A	N/A	Cutoff: 150 ng/mL	N/A
<b>Cocaine Confirmation, Urine</b>	N/A	LC/MS/MS	Agilent QQQ 6420	ng/mL	< 25 ng/mL	N/A	N/A	Benzoylecgonine: 25-5,000 ng/mL Cocaine: 25-5,000 ng/mL	Benzoylecgonine: 25-25,000 ng/mL Cocaine: 25-25,000 ng/mL
<b>Cocaine, Meconium</b>	Coke	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Cocaine Metabolite Assay	Negative / Presumptive Positive. Confirmation to Follow.	Negative	N/A	N/A	Cutoff: 300 ng/g	N/A
<b>Cocaine, Meconium, Confirmation</b>	Creatinine - Urine Adulteration Screen	LC/MS/MS	SCIEX 1200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff Cocaine: ng/g Benzoylecgonine: 40 ng/g	N/A
<b>Creatinine</b>	Creatinine - Urine Adulteration Screen	Kinetic modified Jaffe	Beckman Coulter DxC700AU; Creatinine	mg/dL	≥20.0	N/A	SAMSHA	1.0-300.0 mg/dL	1.0-300.0 mg/dL
<b>Cyclic Citrullinated Peptide Ab</b>	Anti-CCP	Chemiluminescent microparticle immunoassay	Abbott	U/mL	<5.0	N/A	Abbott	0.5-200.0	0.5-1,000
<b>Cyclosporine Level, Trough (Pre-Drug Level)</b>	CSAN	Chemiluminescent microparticle immunoassay	Abbott	ng/mL		Therapeutic Range: 70-320	OSU Pharmacy	30-1,500	30-3,000
<b>Cyclosporine Level, 2HR</b>	CSAN2	Chemiluminescent microparticle immunoassay	Abbott	ng/mL		Therapeutic Range: 320 - 960	OSU Pharmacy	30-1,500	30-3,000
<b>Drugs Detected, Umbilical Cord</b>		LC/MS/MS	SCIEX 1200 QTRAP	6-Monoacetylmorphine Or 7-Aminoclonazepam Or Alpha-hydroxyalprazolam Or Alprazolam Or Amphetamine Or Benzoyllecgonine Or Buprenorphine Or Cocaine Or Codeine Or Cotinine Or Diazepam Or Dihydrocodeine Or Diphenhydramine Or EDDP-methadone Or Ephedrine/Pseudoephedrine Or Fentanyl Or Gabapentin Or Hydrocodone Or Hydroxyzine Or Lidocaine Or Methadone Or Methamphetamine Or Midazolam Or Morphine Or Naluphine Or Naloxone Or Norbuprenorphine Or Nordiazepam Or Norfentanyl Or Noroxycodone Or Oxazepam Or Oxycodone Or Oxycarbazepine Or Promethazine Or Sertraline Or Temazepam Or Tramadol Or Zolpidem	Negative	N/A	N/A	Cutoff (ng/g): 6-Monoacetylmorphine (34), 7-Aminoclonazepam (18), Alpha-hydroxyalprazolam (44), Alprazolam (11), Amphetamine (18), Benzoylecgonine (9), Buprenorphine (18), Cocaine (3), Codeine (44), Cotinine(6), Diazepam(1), Dihydrocodeine(1), Diphenhydramine (1), EDDP-methadone (18), Ephedrine/Pseudoephedrine (9), Fentanyl (3), Gabapentin (222), Hydrocodone(11), Hydromorphone (22), Lidocaine (9), Methadone (6), Methamphetamine (18), Midazolam (11), Morphine (44), Naluphine (9), Naloxone (18), Norbuprenorphine (133), Nordiazepam (11), Norfentanyl (11), Noroxycodone (44), Oxazepam (27), Oxycodone (11), Oxycarbazepine (22), Promethazine (4), Sertraline (18), Temazepam (44), Tramadol(6), Zolpidem(2).	N/A
<b>Drugs Detected, Urine</b>		LC/MS/MS	SCIEX 1200 QTRAP	6-Monoacetylmorphine Or 7-Aminoclonazepam Or 7-Amino-flunitrazepam Or Alpha-Hydroxyalprazolam Or Alprazolam Or Amitriptyline Or Amphetamine Or Atenolol Or Benzoyllecgonine Or Buprenorphine Or Buspiron Or Caffeine Or Chloridiazepoxide Or Chlorpheniramine Or Chlorpromazine Or Citalopram Or Clonazepam Or Cocaine Or Codeine Or Cotinine Or Desipramine Or Desmethyldoxepin Or Dextromethorphan Or Diazepam Or Dihydrocodeine Or Dilantem Or Diphenhydramine Or Doxepin Or Methadone EDDP Or Ephedrine - Pseudoephedrine Or Fentanyl Or Flunitrazepam Or Fluoxetine Or Flurazepam Or Gabapentin Or Haloperidol Or Hydrocodone Or Hydroxyzine Or Imipramine Or Ketamine Or Lidocaine Or Lorazepam Or LSD Or Meprobamate Or Methylenedioxymphetamin e Or Meprobamate Or Methadone Or Methamphetamine Or 7-Aminoclonazepam Or 7-Amino-flunitrazepam Or Alpha-Hydroxyalprazolam Or Alprazolam Or Amitriptyline Or Amphetamine Or Atenolol Or Benzoyllecgonine Or Buprenorphine Or Buspiron Or Caffeine Or Chloridiazepoxide Or Chlorpheniramine Or Chlorpromazine Or Citalopram Or Clonazepam Or Cocaine Or Codeine Or Cotinine Or Desipramine Or Desmethyldoxepin Or Dextromethorphan Or Diazepam Or Dihydrocodeine Or Dilantem Or Diphenhydramine Or Doxepin Or Methadone EDDP Or Ephedrine - Pseudoephedrine Or Fentanyl Or Flunitrazepam Or Fluoxetine Or Flurazepam Or Gabapentin Or Haloperidol Or Hydrocodone Or Hydroxyzine Or Imipramine Or Ketamine Or Lidocaine Or Lorazepam Or LSD Or Meprobamate Or Methylenedioxymphetamin e Or Meprobamate Or Methadone Or Methamphetamine Or 7-Aminoclonazepam Or 7-Amino-flunitrazepam Or 25, 7-Aminoclonazepam Or 200, 7-hydroxymisgamine (100), Alpha-hydroxymidazolam (200), Alpha-hydroxyalprazolam(400), Alprazolam(50), Amitriptyline(50), Amphetamine(250), Atenolol(500), Benzoylecgonine(50), Buprenorphine(100), Bupropion(22), caffeine(15000), Chloridiazepoxide(50), Chlorpheniramine(100), Chlorpromazine(50), Citalopram(100), Clonazepam(200), Cocaine(25), Codeine(200), Cotinine(500), Desipramine(50), Desmethyldoxepin(100), Dextromethorphan(100), Diazepam(100), Dihydrocodeine(100), Dilantem(50), Diphenhydramine(100), Doxepin(100), EDDP-methadone(100), Ephedrine/Pseudoephedrine(100), Fentanyl(20), Flunitrazepam(100), Fluoxetine(350), Flurazepam(50), Gabapentin(1500), Haloperidol(25), Hydrocodone(100), Hydromorphone(200),	Negative	N/A	N/A	Cutoff (ng/mL): 6-Monoacetylmorphine(300), 7-Aminoclonazepam(25), 7-Aminoflunitrazepam(200), 7-hydroxymisgamine (100), Alpha-hydroxymidazolam (200), Alpha-hydroxyalprazolam(400), Alprazolam(50), Amitriptyline(50), Amphetamine(250), Atenolol(500), Benzoylecgonine(50), Buprenorphine(100), Bupropion(22), caffeine(15000), Chloridiazepoxide(50), Chlorpheniramine(100), Chlorpromazine(50), Citalopram(100), Clonazepam(200), Cocaine(25), Codeine(200), Cotinine(500), Desipramine(50), Desmethyldoxepin(100), Dextromethorphan(100), Diazepam(100), Dihydrocodeine(100), Dilantem(50), Diphenhydramine(100), Doxepin(100), EDDP-methadone(100), Ephedrine/Pseudoephedrine(100), Fentanyl(20), Flunitrazepam(100), Fluoxetine(350), Flurazepam(50), Gabapentin(1500), Haloperidol(25), Hydrocodone(100), Hydromorphone(200),	N/A
<b>Drugs Detected (Blood)</b>		LC/MS/MS	SCIEX 1200 QTRAP	6-Monoacetylmorphine Or 7-Aminoclonazepam Or 7-Amino-flunitrazepam Or Alpha-Hydroxyalprazolam Or Alprazolam Or Amitriptyline Or Amphetamine Or Atenolol Or Benzoyllecgonine Or Buprenorphine Or Buspiron Or Caffeine Or Chloridiazepoxide Or Chlorpheniramine Or Chlorpromazine Or Citalopram Or Clonazepam Or Cocaine Or Codeine Or Cotinine Or Desipramine Or Desmethyldoxepin Or Dextromethorphan Or Diazepam Or Dihydrocodeine Or Dilantem Or Diphenhydramine Or Doxepin Or Methadone EDDP Or Ephedrine - Pseudoephedrine Or Fentanyl Or Flunitrazepam Or Fluoxetine Or Flurazepam Or Gabapentin Or Haloperidol Or Hydrocodone Or Hydroxyzine Or Imipramine Or Ketamine Or Lidocaine Or Lorazepam Or LSD Or Meprobamate Or Methylenedioxymphetamin e Or Meprobamate Or Methadone Or Methamphetamine Or 7-Aminoclonazepam Or 7-Amino-flunitrazepam Or 25, 7-Aminoclonazepam Or 200, 7-hydroxymisgamine (100), Alpha-hydroxymidazolam (200), Alpha-hydroxyalprazolam(400), Alprazolam(50), Amitriptyline(50), Amphetamine(250), Atenolol(500), Benzoylecgonine(50), Buprenorphine(100), Bupropion(22), caffeine(15000), Chloridiazepoxide(50), Chlorpheniramine(100), Chlorpromazine(50), Citalopram(100), Clonazepam(200), Cocaine(25), Codeine(200), Cotinine(500), Desipramine(50), Desmethyldoxepin(100), Dextromethorphan(100), Diazepam(100), Dihydrocodeine(100), Dilantem(50), Diphenhydramine(100), Doxepin(100), EDDP-methadone(100), Ephedrine/Pseudoephedrine(100), Fentanyl(20), Flunitrazepam(100), Fluoxetine(350), Flurazepam(50), Gabapentin(1500), Haloperidol(25), Hydrocodone(100), Hydromorphone(200),	Negative	N/A	N/A	Cutoff (ng/mL): 6-Monoacetylmorphine(300), 7-Aminoclonazepam(25), 7-Aminoflunitrazepam(200), 7-hydroxymisgamine (100), Alpha-hydroxymidazolam (200), Alpha-hydroxyalprazolam(400), Alprazolam(50), Amitriptyline(50), Amphetamine(250), Atenolol(500), Benzoylecgonine(50), Buprenorphine(100), Bupropion(22), caffeine(15000), Chloridiazepoxide(50), Chlorpheniramine(100), Chlorpromazine(50), Citalopram(100), Clonazepam(200), Cocaine(25), Codeine(200), Cotinine(500), Desipramine(50), Desmethyldoxepin(100), Dextromethorphan(100), Diazepam(100), Dihydrocodeine(100), Dilantem(50), Diphenhydramine(100), Doxepin(100), EDDP-methadone(100), Ephedrine/Pseudoephedrine(100), Fentanyl(20), Flunitrazepam(100), Fluoxetine(350), Flurazepam(50), Gabapentin(1500), Haloperidol(25), Hydrocodone(100), Hydromorphone(200),	N/A
<b>Ethanol (Alcohol), Urine</b>	Alcohol-Ethyl	Enzymatic	Beckman Coulter DxC700AU; Emit II Plus Ethyl Alcohol Assay	mg/dL	<10	N/A	N/A	10-600 mg/dL	10-600 mg/dL
<b>Alcohol (Ethanol), Blood</b>		Enzymatic	Beckman Coulter DxC700AU; Emit II Plus Ethyl Alcohol Assay	mg/dL	<10	≥300	N/A	10-600 mg/dL	10-600 mg/dL
<b>Ethyl Alcohol, Blood</b>	Alcohol-Ethyl, ETOH	GC-FID	Anlent GC	mg/dL	<10	≥300	N/A	10-400 mg/dL	10-400
<b>Ethylene Glycol, Blood, Quantitative Confirmation</b>	N/A	GC-FID	Agilent GC	mg/dL	<10	≥10	N/A	10-250 mg/dL	10-250

<b>Ethylene Glycol, Blood, Screen with Reflex to Confirmation</b>	Ethylene Glycol Level	Enzymatic UV	Beckman Coulter DxC700AU; Catechem DiorectPak Ethylene Glycol Reagent Kit	None Detected, Presumptive Positive. Confirmation to follow.	None Detected	≥ 10 mg/dL	N/A	Cutoff: 10 mg/dL	N/A
<b>Everolimus, Trough (Pre Drug Level)</b>	Afinitor Zertess	Particle-enhanced turbidimetric immunoassay	Beckman	ng/mL	Therapeutic range not established	N/A	Microgenics Corp. Thermo Scientific OMS Everolimus (FU)	2.0-20.0	2.0-40.0
<b>Fentanyl</b>	N/A	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; ARK Fentanyl II Assay	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 1 ng/mL	N/A
<b>Fentanyl, Meconium</b>		Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; ARK Fentanyl II Assay	Negative / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 2 ng/g	N/A
<b>Fentanyl, Meconium, Confirmation</b>		LC/MS/MS	SCEIX 3200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff Fentanyl: 25 ng/g Norfentanyl: 25 ng/g	N/A
<b>Fentanyl, Urine, Confirmation</b>	Fentanyl Urine Confirmation	LC/MS/MS	Agilent QQQ 6420	ng/mL	< 2.5 ng/mL	N/A	N/A	Fentanyl: 2.5-5,000 ng/mL Norfentanyl: 2.5 - 5,000 ng/mL	Fentanyl: 2.5-25,000 ng/mL Norfentanyl: 2.5-25,000 ng/mL
<b>Gentamicin Level, Peak (Post Dose Level)</b>	N/A	Enzyme immunoassay	Beckman	mcg/mL	3.0-15.0 (Therapeutic Range)	≥ 20.0	OSU Pharmacy	0.3-10.0	0.3-20.0
<b>Gentamicin Level, Trough (Pre Drug Level)</b>	N/A	Enzyme immunoassay	Beckman	mcg/mL	< 1 year: < 1.6 > 1 year: < 1.0 (Therapeutic Range)	< 1 year: ≥ 1.6 > 1 year: > 1.0	OSU Pharmacy	0.3-10.0	0.3-20.0
<b>Glutaraldehyde</b>	Glutaraldehyde - Urine Adulteration Screen	Colorimetric	Beckman Coulter DxC700AU; Schreck SVT Aldehyde Reagent	Negative / Positive	Negative	N/A	N/A	Cutoff: 100ng/mL	N/A
<b>Glutaraldehyde Confirmation</b>		Colorimetric	Schreck Diagnostics AdultraCheck 6	Negative / Positive	Negative	N/A	N/A	Cutoff: 0.20% to 0.40% vol/vol	N/A
<b>Hemoglobin A1C</b>	HA1C	Turbidimetric immunoassay	Beckman	%	4.5-5.6	≥ 6.0	Testbook	4.0-5.8	4.0-15.0
<b>Isoniazid, Blood</b>	GC-FID	GC-FID	Agilent GC	mcg/mL	< 10	≥ 10	N/A	10-400 mcg/dL	10-400
<b>Lidocaine Level</b>	N/A	Enzyme immunoassay	Beckman	mcg/mL	Therapeutic Range: 1.5-5.0	≥ 6.0	OSU Pharmacy	0.5-12.0	0.5-36.0
<b>Methadone</b>	Methadone Screen- Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Methadone Assay	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 300ng/mL	N/A
<b>Methadone, Meconium</b>		Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Methadone Assay	Negative / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	600 ng/g cutoff	N/A
<b>Methadone, Meconium, Confirmation</b>	N/A	LC/MS/MS	SCEIX 3200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff Methadone: 50 ng/g EDDP: 25 ng/g	N/A
<b>Methadone Confirm, Urine</b>	N/A	LC/MS/MS	Agilent QQQ 6420	ng/mL	< 25 ng/mL	N/A	N/A	Methadone: 25-5,000 ng/mL EDDP: 25-5,000 ng/mL	Methadone: 25-25,000 ng/mL EDDP: 25-25,000 ng/mL
<b>Methanol, Blood</b>	Alcohol-Methyl	GC-FID	Agilent GC	mg/dL	< 10	≥ 10	N/A	10-400 mcg/dL	10-400
<b>Methotrexate Level</b>	N/A	Homogeneous enzyme immunoassay	Beckman	umol/L	Due to different protocols using this drug, contact the primary attending physician	N/A	OSU Pharmacy	0.04-1.20	0.04-1,200.00
<b>Nicotine Screen Urine</b>	Cotinine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Thermo Scientific DRI Cotinine Assay	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 500ng/mL	N/A
<b>Opiate</b>	Opiate Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Opiate Assay	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff Clinical: 300ng/mL Workplace: 2000 ng/mL	N/A
<b>Opiate, Meconium</b>	Morphine screen, Codeine screen, Heroin screen	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Opiate Assay	Negative / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 600 ng/g	N/A
<b>Opioids, Meconium, Confirmation</b>	N/A	LC/MS/MS	SCEIX 3200 QTRAP	None Detected / Positive	None Detected	N/A	N/A	Cutoff 6-Monoacetyl morphine: Codeine: 500 ng/g Dihydrocodeine: 100 ng/g Hydrocodone: 75 ng/g Hydromorphone: 100 ng/g Morphine: 100 ng/g	N/A
<b>Opioids, Urine, Confirmation</b>	N/A	LC/MS/MS	Agilent QQQ 6420	ng/mL	6-Monoacetylmorphine < 5 ng/mL, Codeine, Morphine, Hydrocodone, Hydromorphone, and Tramadol < 25 ng/mL.	N/A	N/A	6-Monoacetylmorphine 5-5,000 ng/mL, Codeine 25-5,000 ng/mL, Morphine 25-5,000 ng/mL, Hydrocodone 25-5,000 ng/mL, Hydromorphone 25-5,000 ng/mL, Tramadol 25-5,000 ng/mL.	6-Monoacetylmorphine 5-25,000 ng/mL, Codeine 25-25,000 ng/mL, Morphine 25-25,000 ng/mL, Hydrocodone 25-25,000 ng/mL, Hydromorphone 25-25,000 ng/mL, Tramadol 25-25,000 ng/mL.
<b>Oxidants</b>	Oxidants-Urine Adulteration Screen	Colorimetric	Beckman Coulter DxC700AU; Schreck SVT Oxidants Reagent	Negative / Positive	Negative	N/A	N/A	Cutoff: 50 mg/mL	N/A
<b>Oxidants Confirmation</b>		Colorimetric	Schreck Diagnostics AdultraCheck 6	Negative / Positive	Negative	N/A	N/A	Cutoff: 5 mg/dL Oxidants	
<b>Oxycodone</b>	Oxycodone Screen- Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Thermo Scientific DRI Oxycodone	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 100ng/mL	N/A
<b>Oxycodone, Urine, Confirmation</b>	N/A	LC/MS/MS	Agilent QQQ 6420	ng/mL	< 25 ng/mL	N/A	N/A	Oxycodone: 25-5,000 ng/mL Oxycodone: 25-5,000 ng/mL Noroxycodone: 25-25,000 ng/mL	Oxycodone: 25-25,000 ng/mL Oxycodone: 25-25,000 ng/mL Noroxycodone: 25-25,000 ng/mL
<b>Oxycodone, Meconium</b>	Oxycotin	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Thermo Scientific DRI Oxycodone	Negative / Presumptive Positive	Negative	N/A	N/A	Cutoff: 200 ng/g	N/A
<b>Pentobarbital Level</b>	Nembutal	Gas chromatography	Agilent GC	ug/mL	Intracranial pressure therapy: 30-46	≥ 45	OSU Pharmacy	5-50	5-50
<b>pH</b>	pH - Urine Adulteration Screen	Colorimetric	Beckman Coulter DxC700AU; Schreck SVT pH Reagent	N/A	4.5-9.0	N/A	SAMSHA	3.0-9.0	3.0-9.0
<b>pH Confirmation</b>	pH - Urine Adulteration Confirmation	pH meter	Corning	N/A	4.5-9.0	N/A	SAMSHA	3.0-11.0	3.0-11.0
<b>Phencyclidine</b>	PCP Screen - Urine	Enzyme multiplied immunoassay	Beckman Coulter DxC700AU; Emit II Plus Phencyclidine Assay	Negative / Presumptive Positive / Presumptive Positive Confirmation to follow.	Negative	N/A	N/A	Cutoff: 25ng/mL	N/A
<b>Phenylethylamine Free Level</b>	Dilantin, Free	Chemiluminescent microparticle immunoassay	Abbott	mcg/mL	0.6-2.4 (Therapeutic Range)	≥ 3.0	OSU Pharmacy	0.5-40.0	0.5-40.0
<b>Sirolimus (Rapamycin) Level, Random</b>	Rapamycin	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	None Monon. Transplant: 4.0-12.0 Therapeutic: 6.0-15.0	N/A	OSU Pharmacy	2.0-30.0	2.0-60.0
<b>Specific Gravity</b>	N/A	Refractometry	Reichert Technologies TS Meter D Clinical Refractometers	N/A	1.003-1.030	N/A	SAMSHA	1.000-1.045	1.000-1.045
<b>Tacrolimus, Random</b>	Prograf	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	None Monon. Transplant: 4.0-12.0 Therapeutic: 6.0-15.0	N/A	OSU Pharmacy	2.0-30.0	2.0-60.0
<b>Toxicology Diversion Screen</b>		LC/MS/MS	SCEIX 3200 QTRAP	6-monoacetylmorphine Or 7-aminoclonazepam Or 7-amino-flunitrazepam Or Alpha-Hydroxybutyrate Or Alprazolam Or Amphetamine Or Benzoyllecgonine Or Biphenamine Or Chlorazepate Oxide Or Clonazepam Or Cocaine Or Codeine Or Diazepam Or Dihydrocodeine Or Methadone EDDP Or Fentanyl Or Flunitrazepam Or Flurazepam Or Hydrocodone Or Hydromorphone Or Ketamine Or Lorazepam Or Meperidine Or Methadone Or Methamphetamine Or Morphine Or Nalbuphine Or Norbuprenorphine Or Norbuprenorphine Or Nordiazepam Or Norfentanyl Or Noroxycodone Or Norpropoxyphene Or Oxazepam Or Oxycodone Or Oxycodone Or Propoxyphene Or Temazepam Or Tramadol Or Triazolam Or Midazolam Or Hydroxyzolam Or Negative	Negative	N/A	N/A	Cutoff (ng/mL): 6 Monoacetylmorphine(500), 7 Aminoclonazepam(25.7), Amoclonazepam(50), Alphahydroxybutyrate(200), Alprazolam(50), Amphetamine(250), Benzoyllecgonine(50), Buprenorphine (500), Chlorazepate(50), Clonazepam(200), Cocaine(25), Codeine(200), Diazepam(100), Dihydrocodeine(100), EDDP/methadone(100), Fentanyl(25), Flunitrazepam(100), Flurazepam(50), Hydrocodone(100), Hydromorphone(200), Ketamine(25), Lorazepam(100), Meperidine(50), Methadone(50), Methamphetamine(500), Morphine(200), Nalbuphine(50), Norbuprenorphine(300), Nordiazepam(100), Norfentanyl(100), Noroxycodone(100), Norpropoxyphene(50), Oxazepam(200), Oxycodone(100), Oxycodone(100), Oxymorphone(200), Propoxyphene(100), Temazepam(100), Triazolam(50), Triazolam(100), Midazolam(100), Hydroxyzolam(100)	N/A

<p><b>Toxicology Diversion Screen</b> NCH</p>	<p>LC/MS/MS</p>	<p>SCHIEF 3200 QTRAP</p>	<p>6-monoacetylmorphine Or 7-aminoclonazepam Or 7-aminoflunitrazepam Or Alpha-Hydroxyvalproic acid Or Alprazolam Or Buprenorphine Or Chlorazepoxide Or Clonazepam Or Codeine Or Diazepam Or Diliazem Or Methadone EDOP Or Fentanyl Or Flunitrazepam Or Flurazepam Or Hydroxycarbonyl Or Hydrocodone Or Ketamine Or Lorazepam Or Meperidine Or Methadone Or Midazolam Or Morphine Or Hydroxyzolam Or Nalbuphine Or Norepinephrine Or Nordiazepam Or Norfentanyl Or Noroxycodone Or Oxazepam Or Oxycodone Or Oxycodone Or Temazepam Or Triazolam Or Negative</p>	<p>Negative</p>	<p>N/A</p>	<p>N/A</p>	<p>Cutoff (ng/mL): 6 Monoacetylmorphine(500), 7 Aminoflunitrazepam(25), 7 Aminoclonazepam(50), Alphahydroxyalprazolam(200), Alprazolam(50), Buprenorphine(500), Chlorazepoxide(50), Clonazepam(200), Codeine(200), Diazepam(100), Dihydrocodone(100), EDOP(methadone)(100), Fentanyl(25), Flunitrazepam(100), Flurazepam(50), Hydrocodone(100), Hydroxycarbonyl(200), Ketamine(25), Lorazepam(100), Meperidine(50), Methadone(50), Midazolam(100), Hydroxymidazolam(100), Morphine(200), Nalbuphine(50), Norepinephrine(300), Nordiazepam(100), Norfentanyl(100), Noroxycodone(100), Oxazepam(200), Oxycodone(100), Oxycodone(200), Temazepam(100), Triazolam(100)</p>	<p>N/A</p>	
<p><b>Valproic Acid, Free</b></p>	<p>FVPA</p>	<p>Chemiluminescent microparticle immunoassay</p>	<p>Abbott</p>	<p>mcg/mL</p>	<p>5-35 (Therapeutic Range)</p>	<p>&gt;40</p>	<p>OSU Pharmacy</p>	<p>2-150</p>	<p>2-150</p>
<p><b>Valproic Acid, Total</b></p>	<p>VPA</p>	<p><b>TOX:</b> Chemiluminescent microparticle immunoassay <b>RRL:</b> Serum or plasma is mixed with Reagent 1, which contains antibodies to valproic acid and the coenzyme nicotinamide adenine dinucleotide (NAD). Subsequently, Reagent 2, containing valproic acid labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH), is added. Valproic acid in the sample and valproic acid labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the valproic acid concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that can be measured spectrophotometrically.</p>	<p>TOX: Abbott RRL: Beckman</p>	<p>mcg/mL</p>	<p>50-120 (Therapeutic Range)</p>	<p>&gt;150</p>	<p>Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacokinetics, 1995:29-442-50</p>	<p>4-150</p>	<p>4-750</p>
<p><b>Cytogenetic Studies</b></p>	<p>Cytogenetics, karyotype <b>Chromosome Analysis</b> Panel Components: D5S23, D5S721, CFSTR, 5p15.2, 5q31.34, D7Z1, D7S486, 7 centromere, 7q31, DR22, D20S108, 8 centromere, 20q12</p>	<p>Manual</p>	<p>N/A</p>	<p>N/A</p>	<p>See report</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>MDS FISH Panel</b></p>	<p>D5S23, D5S721, CFSTR, 5p15.2, 5q31.34, D7Z1, D7S486, 7 centromere, 7q31, DR22, D20S108, 8 centromere, 20q12</p>	<p>Fluorescent in situ Hybridization (FISH)</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 1q25.2 (ABL2)</b></p>	<p>ABL2 rearrangement, ABL2, Abelson gene 2, 1q25.2</p>	<p>Fluorescent in situ Hybridization (FISH)</p>	<p>N/A</p>	<p>%</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 9q34.11-q34.13 (ABL1)</b></p>	<p>ABL1 rearrangement, ABL1, Abelson gene 1, CG, 9q34.11-q34.13</p>	<p>Fluorescent in situ Hybridization (FISH)</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 9p11-q11 (D9Z4)</b></p>	<p>9 centromere, CEP 9, 9 centromere, D9Z4, 9p11-q11</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 7p11.1-q11.1 (D7Z1)</b></p>	<p>7 centromere, CEP 7, 7 centromere, D7Z1, 7p11.1-q11.1</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 7p11.1-q11.1, 7q31 (D7Z1-D7S486)</b></p>	<p>7q-, 7, 7q31, 7 centromere, D7Z1, 7p11.1-q11.1, D7S486, 7q31</p>	<p>Fluorescent in situ Hybridization (FISH)</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 15p11.1-q11.1 (D15Z4)</b></p>	<p>CEP15, 15 centromere, D15Z4, 15q11.1-q11.1</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 20q12.8p11.1-q11.1 (D20S108-D8Z2)</b></p>	<p>20q-, 8, 8 centromere, CEP 8, DR22, 8p11.1-q11.1 &amp; D20S108, 20q12</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CLL FISH Panel</b></p>	<p>Panel Components: ATM, 11q22.3, TP53, 17p13.1, D12Z2, 12 centromere, DUS3B, 13q14.3</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 2p16.1, 2q32.1 (REL-DHRC11)</b></p>	<p>REL, 2p16.1, DRC1, 2q32.1</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 6q21, 6q23 (SEC61, 6q23 (SEC61-MVB))</b></p>	<p>SEC61, 6q21, myeloblastosis, MVB, 6q23</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 9p21, 9p11-q11 (CDKN2A-D9Z4)</b></p>	<p>CDKN2A, cyclin dependent kinase inhibitor 2A, 9p21, 9 centromere, D9Z4, 9p11-q11</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 12p11.1-q11.1, 13q14.3, 13q44 (D12Z2-D12S319-LAMP1)</b></p>	<p>12p11.1, 12 centromere, trisomy 12, 4q11.1, 13q-, D12Z2, 12p11.1-q11.1, D13S319, 13q14.3, 13q44, LAMP1, 13q44</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>MYELOMA FISH PANEL</b></p>	<p>Panel Components: CDKN2C, 1p32.3, CSN1B, 1q21, CEP 7, 7p11.1-q11.1, CEP 9, 9p11-q11, CEP15, 15p11.1-q11.1, ATM, 11q22.3, TP53, 17p13.1, RB1, 13q14.2, LAMP1, 13q44, IGHCCND1, 14q32.3, 11q13, 11q14.3</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 1p32.3, 1q21 (CDKN2C-KSN1B)</b></p>	<p>1p, 1q, CDKN2C, 1p36.3, CSN1B, 1q21</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 3q27 (BCL6)</b></p>	<p>BCL6 rearrangement, B-cell lymphoma 6, BCL6, 3q27</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 5p33-34, 5p15.2 (CFSTR-D5S23-D5S721)</b></p>	<p>5p-5q-, 5, 5q-, D5S23, D5S721, 5p15.2, CFSTR, 5q31.34, colony stimulation factor</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 8q24.2 (MYC)</b></p>	<p>MYC rearrangement, CMYC, MYC, 8q24</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 11q22.3, 17p13.1 (ATM-TP53)</b></p>	<p>ATM-TP53, ATM, 11q22.3, TP53, 17p13.1</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 12p13.2-13q22 (ETV6-RUNX1)</b></p>	<p>ETV6-RUNX1 translocation, t(12;21), TEL-AML1, ETV6, 12p13.2, RUNX1, 21q22</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 13q14.2, 13q44 (RBL1-LAMP1)</b></p>	<p>13q-, 4q11.1, 13, RBL1, 13q14.2, LAMP1, 13q44</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 14q22.3-11q13.3 (IGH-CCND1)</b></p>	<p>translocation (11;14), t(11;14), Mantle cell lymphoma FISH, MCL FISH, CCND1, cyclin D1, 11q13, IGH, 14q32.3</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 8p11.1-q11.1, 8q24 (DRZ2-MYC)</b></p>	<p>8 centromere, 8, DRZ2, 8p11.1-q11.1, MYC, same color, 8q24</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 2p24.2p11-q11 NMYC-DZ11</b></p>	<p>NMYC amp, NMYC, neuroblastoma, MYC, 2p24.1, 2 centromere, 2p11.1-q11.1</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 11p15.4 (NUP98)</b></p>	<p>NUP98 rearrangement, nucleoside 98, NUP98, 11p15.4</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>Xp22.3-Yp11.32 (P2RY8)</b></p>	<p>P2RY8 rearrangement, P2RY8, P2Y receptor, purinergic 8, P2RY8, 2p22.3, Yp11.32</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 1q23-19p13.3 (PBX1-TCF3)</b></p>	<p>PBX1-TCF3 translocation, t(1;19), pre-B-cell leukemia transcription factor 1, PBX1, 1q23, transcription factor 3, TCF3, 19p13.3</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 8q23 (PDGFRB)</b></p>	<p>PDGFRB rearrangement, platelet derived growth factor beta, PDGFRB, 8q23</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 15q24-17q21 (PML-RARA)</b></p>	<p>t(15;17), PML-RARA, APL, FISH, promyelocytic leukemia, PML, 15q24, retinoic acid receptor alpha, RARA, 17q21</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 17q21 (RARA)</b></p>	<p>RARA rearrangement, retinoic acid receptor alpha, RARA, 17q21</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 21q22 (RUNX1)</b></p>	<p>RUNX1 rearrangement, runt-related transcription factor 1, AML1, acute myeloid leukemia marker 1, RUNX1, 21q22.12</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p><b>CG 8q21.31-q22 (RUNX1T1-RUNX1)</b></p>	<p>RUNX1T1-RUNX1 translocation, t(8;21), t(8;21), AML1, ETO, eight-twenty-one, RUNX1T1, 8q21.3, runt-related transcription factor 1, RUNX1, 21q22</p>	<p>Fluorescent in situ Hybridization</p>	<p>N/A</p>	<p>%</p>	<p>See report or contact lab at 614-293-9898 for current reference range</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

4q12 (SCFD2-LNX-PDGFR-RT)	PDGFR rearrangement, 4q trisomy, CHC2, platelet derived growth factor alpha, SCFD2-LNX PDGFR, 4q12	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.13-q32.2 (TCL1)	TCL1 rearrangement, inv(14), T-cell leukemia/lymphoma protein 1, TCL1, 14q32	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 7q34 (TRB)	TRB rearrangement, TCRB, T-cell receptor beta, TRB, 7q34	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG Xp11.4-q11.1, Yq12 (DXZI-DZYI)	XV, opposite sex, HMT FISH X centromere, Xp11.4-q11.1, Yq, Yq12	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 9p11.1-q11.1, 7q22, 7q36 (DZ1-CX1-CX1.1)	7q-, 7, centromere, DZ1, 7p11.1-q11.1, CUX1, cell like homobox 1, CDP, CUL1, 7q22, CUX1, collins1, 7q36	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 2p23.2-p32.1 (ALK)	ALK rearrangement, anaplastic lymphoma kinase, ALK, 2p23	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 19q13.3 (BCL2)	BCL2 rearrangement, B-cell leukemia/lymphoma 2, BCL2, 19q13	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 22q11.2-9q34.1 (BCR-ABL1)	BCR-ABL1, t(9;22), Philadelphia chromosome, Ph+ FISH, Abelson 1, ABL1, 9q34, breakpoint cluster region, BCR, 22q11.2	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 11q22-18q21.3 (BIRC3-MALT1)	BIRC3-MALT1 translocation, q11.18, AP2-MLT, baculoviral IAP repeat containing 3, BIRC3, 11q21, mucosa-associated lymphoid tissue lymphoma translocation protein 1, MALT1, 18q21	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 16q22 (CBFB)	CBFB, core binding factor beta rearrangement, inv(16), t(16;16), 16q22	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 16q22-16p13.1 (CBFB-MYH11)	CBFB-MYH11, inv(16), t(16;16), inverted 16, translocation 16-16, myosin heavy chain 11, MYH11, 16p13, core binding factor, CBFB, 16q22	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 4p11-q11.1, 10q11.1-q11.1 (DAZI-D10Z1)	4 centromere, CEP4, 4 cen., 4, 4p11.1-q11.1, 10 centromere, CEP10, 10 cen., 10, 10q11.1-q11.1	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG Xp22.33-Yp11.32 (CRLF2)	CRLF2 rearrangement, cytokine receptor like factor 2, CRLF2, Xp22.33-Yp11.32	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 6p22-9q34 (DEK-NUP214)	DEK-NUP214 translocation, DEK, 6p22.3, nucleoporin 214, NUP214, 9q34.12-9q34.11	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 5q31, 5p15.2 (EGRI-DSS23-DSS721)	5p, 5q, 5p-, 5, DSS23-DSS721, 5p15.2, EGRI, early growth response 1, 5q31	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 12p13.2 (ETV6)	ETV6 rearrangement, ETV6 variant transcription factor 6, TEL, ETV6, 12p13	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 22q12 (EWSR1)	EWSR1 rearrangement, Ewing's sarcoma, EWS, EWS-FLI1, EWSR1, 22q12	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 8p11.2, 8p11.1-q11.1 (FGFR1-D8Z2)	FGFR1 rearrangement, fibroblast growth factor receptor 1, FGFR1, 8p11.2, 8 centromere, 8p11.1-q11.1	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 13q14 (FOXO1)	FOXO1 rearrangement, FKHR, Foxhead box O, alveolar rhabdomyosarcoma, 13q14	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3 (IGH)	IGH rearrangement, immunoglobulin heavy locus, IGH, 14q32.3	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-qp21 (IGH-CCND3)	IGH-CCND3 translocation, t(6;14), IGH, 14q32.3, CCND3, cyclin D2, ccn1	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-18q21.3 (IGH-BCL2)	IGH-BCL2 translocation, t(14;18), IGH, 14q32.3, B-cell leukemia/lymphoma 2, BCL2, 18q21.3	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-4p16.3 (IGH-FGFR3)	IGH-FGFR3 translocation, t(6;14), IGH, 14q32.3, FGFR3, fibroblast growth factor 3, 4p16	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-16q23 (IGH-MAF)	IGH-MAF translocation, t(14;16), IGH, 14q32.3, musculoaponeurotic fibrosarcoma, MAF, c-MAF, 16q23	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-20q12 (IGH-MAFB)	IGH-MAFB translocation, t(14;20), IGH, 14q32.3, leucine zipper transcription factor 9, MAFB, 20q12	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 14q32.3-8q24.8p11.1-q11.1 (IGH-MVC-D8Z2)	IGH-MVC translocation, t(8;14), Burkitt lymphoma FISH, IGH, 14q32.3, MVC, 8q24, 8 centromere, 8q11.1-q11.1	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 2p11.2 (IGK)	IGK rearrangement, immunoglobulin kappa, IGK, 2p11.2	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 9p24 (JAK2)	JAK2 rearrangement, JTK10, Janus kinase 2, JAK2, 9p24	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 11q23 (KMT2A)	KMT2A rearrangement, MLL, mixed lineage leukemia, lysine methyltransferase 2A, KMT2A, 11q23	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CG 3q26.2 (MECOM)	MECOM rearrangement, EVI1, MDS1 and EVI1 complex locus, MECOM, 3q26.2	Fluorescent in situ Hybridization	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
Pediatric MDS FISH Panel	DSS23-DSS721, CSF1R, Sp15.2 / 5q13-34, DZ1/D7S486, 7 centromere / 7q31, D9Z1, 8 centromere	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
Pediatric MDS w/ EGR1 FISH Panel	DSS23-DSS721, EGR1, Sp15.2 / 5q11, DZ1/D7S486, 7 centromere / 7q31, D9Z1, 8 centromere	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
MDS w/ EGR1 FISH Panel	DSS23-DSS721, EGR1, Sp15.2 / 5q11, DZ1/D7S486, 7 centromere / 7q31, DK2/D0S108, 8 centromere / 20q12	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
MPD FISH Panel	Panel Components: PDGFR ba, 4q12 PDGFR ba, 5q12 FGFR1 ba, 8p12 JAK2 ba, 9p24 BCR/ABL t(9;22)(q34)	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CLL Extended FISH Panel	Panel Components: ATM, 11q22.3 TP53, 17p13.1 D12Z2, 12 centromere DIS3S19, 15q14.3 MYC ba, 8q24 FUSION, 20q12	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
Myeloma IGH Reflex FISH Panel	Panel Components: IGH-FGFR3, 14q32.3/4p16 IGH-MAF, 14q32.3/16q23 IGH-MAFB, 14q32.3/20q12	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
Eosinophil AEL-CEL FISH Panel	Panel Components: PDGFR ba, 4q12 PDGFR ba, 5q12 FGFR1 ba, 8p12 FUS ba, 20q12	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
NHL B-Cell FISH Panel	Panel Components: BCL6 ba, 3q27 MYC ba, 8q24 IGH-BCL2, 14q32.3/18q21	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
NHL T-Cell FISH Panel	Panel Components: TRB ba, 7q34 TCL1 ba, 14q32.13-32.2	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
ALL FISH Panel	Panel Components: 4 centromere 10 centromere BCR/ABL1, 22q11.2/9q34 KMT2A ba, 11q23 ETV6/RUNX1, 12p13.2/12q22	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
AML FISH Panel	Panel Components: MECOM ba, 3q26 RUNX1/RUNX1, 8q21.3/21q22 KMT2A ba, 11q23 PML/RARA, 15q24/17q21 CBFB ba, 16q22 TP53/CEP17, 17p11.1/17 centromere	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
17p13.1, 17p11.1-q11.1 (TP53-D17Z1)	TP53, tumor protein 53, 4q117p-17, 17p13.1, CEP17, 17 centromere, 17p11.1-17q11.1, D17Z1	Fluorescent in situ Hybridization (FISH)	N/A	%	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A

<b>Acid Fast Bacilli Culture and Smear</b>	Acid Fast Culture	Culture; Susceptibility testing performed based on established lab guidelines	Bacter/Bruker Dhaltonics MicroFlex	N/A	Collect time is required for each specimen submission. Normal is negative.	Presence of Acid-Fast Bacilli	N/A	N/A	N/A
<b>Acid Fast Bacilli Smear</b>	AFB Smear	Smear	N/A	N/A	Collect time is required for each specimen submission. Normal is negative.	Presence of Acid-Fast Bacilli	N/A	N/A	N/A
<b>Actinobacter Culture</b>	N/A	Surveillance Culture	Vitek	N/A	Negative	N/A	N/A	N/A	N/A
<b>Actinomyces Screen</b>	N/A	Gram stain	N/A	N/A	Negative	N/A	N/A	N/A	N/A
<b>Affirm Test (Vaginitis DNA Probe)</b>	Affirm	Nucleic Acid Hybridization	BD Microprobe Processor	N/A	Candida = negative Gardnerella = negative Trichomonas = negative	N/A	N/A	N/A	Negative / Positive
<b>AFIDx</b>	Amorobic ID	Culture	Bruker Dhaltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
<b>Anaerobic Culture</b>	Anaerobic Culture	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Dhaltonics MicroFlex	N/A	Collect time is required for each specimen submission	N/A	N/A	N/A	N/A
<b>Atypical Bacterial Pneumonia, PCR</b>	Atypical Bacterial Pneumonia Panel	PCR	BioFire	N/A	Not Detected	N/A	Package Insert	N/A	Not Detected / Detected
<b>Autoclave Spore Check</b>	Autoclave Spore Check Assay	Steam sterilization	N/A	N/A	Negative	N/A	N/A	N/A	Negative / Positive
<b>Bacterial Culture and Direct Smear, Lesion, Tissue, Device</b>	Routine Culture and Smear	Smear; Culture; Susceptibility testing performed based on established lab guidelines	N/A	N/A	No growth	See critical call list for organisms requiring notification.	Validation	N/A	N/A
<b>Bacterial vaginosis Panel</b>	BV	TMA - transcription-mediated amplification	Hologic Panther Aptima kit	N/A	Negative	N/A	Package Insert; Clinical Data	N/A	Negative, Positive
<b>Beta Strep, Vaginal Screen</b>	Group B Streptococcus Testing by PCR	Concentration in LHM broth for > 18 hours followed by real-time PCR testing for GBS DNA sequence	BD MAX	N/A	Negative	N/A	Validation	N/A	Negative / Positive
<b>Beta Strep, Vaginal Screen, Reflex Susceptibility for Penicillin Allergy</b>	GBS, Streptococcus agalactiae	Concentration in LHM broth for > 18 hours followed by real-time PCR testing for GBS DNA sequence	BD MAX	N/A	Negative	N/A	Validation	N/A	Negative / Positive
<b>BK Virus DNA PCR, Quant, Line</b>	N/A	Real-Time PCR	3M Integrated Cycler	copies/mL	<500	N/A	Validation	500-10,000,000,000	500-endpoint
<b>BK Virus DNA On, PCR, Plasma</b>	BKBP	Real-Time PCR	3M Integrated Cycler	copies/mL	<500	N/A	Validation	500-5,000,000	500-5,000,000
<b>Blood Culture, AFB, Mycobacteria</b>	Blood, acid fast	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Dhaltonics MicroFlex	N/A	Reference Range-Negative	Collect time is required for each specimen submission	Growth	N/A	N/A
<b>Blood Culture, Fungus</b>	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Dhaltonics MicroFlex	N/A	Reference Range-Negative	Collect time is required for each specimen submission	Growth	N/A	N/A
<b>Blood Culture, Pediatric</b>	N/A	Culture; Susceptibility testing performed based on established lab guidelines	BioMerieux Virtuo/Bruker Dhaltonics MicroFlex	N/A	No growth	Growth	N/A	N/A	N/A
<b>Blood Culture</b>	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Dhaltonics MicroFlex, BioMerieux Virtuo, Vitek	N/A	No growth	All first time positive blood cultures are called with organism morphology details. Any additional positives after 48 hours requires an additional call. If Gram negative resistance marker or vanA, vanB is detected on Nanosphere an additional call is made.	N/A	N/A	N/A
<b>Blood Product Protocol</b>	N/A	Culture	BioMerieux Virtuo	N/A	Negative	Growth	N/A	N/A	N/A
<b>Blood, Transfusion Reaction</b>	Transfusion Reaction, Blood Product Culture	Culture	BioMerieux Virtuo	N/A	Negative	Growth	N/A	N/A	N/A
<b>BMTCDP</b>	BMT C. diff by PCR	PCR	BD MAX	N/A	Negative	N/A	Package insert; in-house validation; literature	N/A	Negative / Positive
<b>Body Fluid Culture and Direct Smear</b>	Sterile fluid culture	Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Dhaltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
<b>Candida/Trichomonas Panel</b>	CV/TV	Transcription-mediated amplification	Hologic Panther Aptima kit	N/A	Not Detected	N/A	Package Insert; Clinical Data	N/A	Not Detected/ Detected
<b>C. difficile by PCR (Clostridium difficile toxin)</b>	N/A	PCR	BD MAX	N/A	Negative	N/A	N/A	N/A	Negative / Positive
<b>Candida auris Screen by PCR</b>	Candida auris Screen	Real-Time PCR	DiASorin	N/A	Not Detected	Detected	PE Literature	N/A	Not Detected/ Detected
<b>CAPD Fluid Bacterial Culture</b>	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Dhaltonics MicroFlex	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
<b>Catheter Tip Culture</b>	N/A	Culture	Vitek/Bruker Dhaltonics MicroFlex	N/A	Negative: Vascular Catheter tip cultures are interpreted in conjunction with blood culture results.	Growth	N/A	N/A	N/A
<b>Chlamydia and Gonorrhea Amplified</b>	Chlamydia trachomatis & Neisseria gonorrhoeae NAAT Testing	TMA - transcription-mediated amplification	Hologic Aptima Combo 2 Assay on Panther	N/A	Not Detected	N/A	Package Insert	N/A	N/A
<b>CMV by PCR, Quantitative, Blood</b>	CMV Viral Load, CMV PCR	Real-Time PCR	Abbott	IU/mL	<50	N/A	Literature / History	50-156,000,000	50-156,000,000
<b>EBV by PCR, Quantitative, Blood</b>	EBV Viral Load, EBV PCR	Real-Time PCR	3M Integrated Cycler	IU/mL	<1,000	≥10,000	Validation	1,000-5,000,000	1,000-5,000,000
<b>EBV Rapid PCR, CSF Only</b>	EBV PCR, EBV CSF	Real-Time PCR	3M Integrated Cycler	IU/mL	Not Detected	≥10,000	Validation	1-10,000	Not Detected, Detected <10,000, Detected ≥10,000
<b>Empal Susceptibility Testing</b>	N/A	TREK panel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Fungus Culture</b>	N/A	Culture; Susceptibility testing performed based on established lab guidelines	N/A	N/A	Collect time is required for each specimen submission. No growth.	Growth	N/A	N/A	N/A
<b>Fungus Culture (Skin, Hair, Nails)</b>	N/A	Culture	N/A	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
<b>Fungus Smear</b>	Calcofluor White fluorescent stain	Smear	N/A	N/A	Negative	Positive for fungal elements	N/A	N/A	N/A
<b>Genital Culture, Bacterial</b>	Vaginal, Cervical, Urethral	Smear when indicated; Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Dhaltonics MicroFlex	N/A	Normal flora or no growth, depending on site	See critical call list for organisms that require a call.	N/A	N/A	N/A
<b>Gram Stain</b>	N/A	Smear	N/A	N/A	Negative	See Critical Call procedure for list of sources that are called to physician/manager.	N/A	N/A	N/A
<b>H. Pylori Urea Breath Test</b>	UBT for H. pylori, BreathTok	Infrared Spectrophotometry	Osaka UBT POCone	N/A	Cut-off value is 2.4 for adults and 10.0 for children 3-17 years.	N/A	Package Insert	N/A	Negative / Positive
<b>Hepatitis B DNA</b>	HBV Viral Load	Real-Time PCR	Abbott	IU/mL (log IU/mL)	<10 (<1.00)	N/A	Validation/ Package Insert	10-1,000,000,000	10-1,000,000,000
<b>Hepatitis C by PCR, Quant</b>	HCV Viral Load	Real-Time PCR	Abbott	IU/mL (log IU/mL)	<12 (<1.08)	N/A	Validation/ Package Insert	12-100,000,000 (1.08-8.00)	12-100,000,000 (1.08-8.00)
<b>HIV Viral Load RNA PCR Quant</b>	HIV Viral Load	Real-Time PCR	Abbott	copies/mL (log copies/mL)	<40 (<1.60)	N/A	Validation/ Package Insert	40-10,000,000 (1.60-7.00)	40-10,000,000 (1.60-7.00)
<b>HSV by PCR, Fluid/Lesion</b>	Herpes Simplex Virus 1 and 2 Testing by PCR	Real-Time PCR	DiASorin	N/A	Not Detected	Positive in CSF	Package Insert / Literature	N/A	Detected / Not Detected
<b>Immunocompromised Respiratory Panel</b>	BioFire RP2.1	Film Array PCR	BioFire	N/A	Not Detected	N/A	Package Insert / Literature	N/A	Influenza A Only: Detected, Indeterminate, Not Detected
<b>Influenza A/B Rapid Molecular</b>	Rapid Flu	Isothermal Nucleic Acid Amplification	Abbott	N/A	Not Detected	N/A	Alere-1 Influenza A+B package insert	N/A	Not Detected / Indeterminate
<b>Influenza A/B, RSV by PCR</b>	Flu PCR, RSV PCR	PCR	3M Integrated Cycler	N/A	Not Detected	N/A	Validation	N/A	Detected/ Not Detected
<b>Lactoferrin, Qualitative, Stool</b>	Fecal Leukocytes, Stool for WB/C	Immunochromatographic	Alere LEUKO/EZ VUE	N/A	Negative	N/A	Package Insert	N/A	Negative / Positive
<b>Legionella Culture</b>	N/A	Culture	Bruker Dhaltonics MicroFlex	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
<b>Legionella Envrion</b>	Environmental Culture for Legionella	Culture	Bruker Dhaltonics MicroFlex	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
<b>Lower Respiratory Culture, Bacterial</b>	RES	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Dhaltonics MicroFlex	N/A	Normal flora	N/A	N/A	N/A	N/A
<b>M Tuberculosis Complex by PCR</b>	TB PCR, MTB, M. tuberculosis	Real-Time PCR	GeneXpert	N/A	Not Detected	Detected	Package Insert / Reference Materials	N/A	Not Detected / Detected
<b>Microscopic Arthrozoal Meningitis/ Encephalitis Panel, CSF</b>	Arthrozoal	Macroscopic Exam	N/A	N/A	Negative; Artifact (not arthrozoal)	N/A	N/A	N/A	N/A
<b>Meningitis/ Encephalitis Panel, CSF</b>	BioFire Meningitis / Encephalitis Panel	Film Array PCR	BioFire	N/A	Not Detected	Detected	Package Insert	N/A	Detected / Not Detected
<b>MRSA Screening Culture Panel, Nares, Axilla, Groin/Wound</b>	MRSA Screen	Culture	N/A	N/A	Negative for MRSA	N/A	N/A	N/A	N/A
<b>Molecular Enteric Panel, Stool</b>	Gastrointestinal Panel	Molecular - real time PCR	BD MAX	N/A	Negative	N/A	N/A	N/A	Negative / Positive
<b>Molecular Stool Parasite Panel</b>	O&P	Real-Time PCR	BD MAX	N/A	Negative	N/A	Package insert; Microbiology Reference material	N/A	Negative / Positive
<b>Neisseria-gonococcus Screen</b>	GC Screen	Culture on selective agar for N. gonorrhoea and N. meningitidis	N/A	N/A	Negative	N/A	N/A	N/A	N/A
<b>Outside Fungal ID</b>	Dermatophyte Identification	Culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Outside Fungal ID</b>	Mold Identification	Culture	Bruker Dhaltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
<b>Outside Mycobacterial ID</b>	Yeast Identification	Culture	Bruker Dhaltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
<b>Pinworm Exam</b>	Microscopic exam	Microscopic exam	N/A	N/A	Negative	N/A	N/A	N/A	N/A
<b>Plesiomonas/Aeromonas Screen, Stool</b>	Aeromonas / Plesiomonas Screen	Culture	Vitek/Bruker Dhaltonics MicroFlex	N/A	Negative	N/A	N/A	N/A	N/A
<b>POCT Chlamydia trachomatis and Neisseria gonorrhoeae (CT/NG)</b>	bins to GC and Chlamydia	PCR	Bioss	N/A	Not Detected	N/A	Package Insert	N/A	Detected / Not Detected
<b>Quantitative Tissue Culture</b>	N/A	Tissue is weighed, serially diluted, and cultured for exact colony count.	Vitek/Bruker Dhaltonics MicroFlex	colony forming units/gram	No growth	N/A	N/A	N/A	N/A
<b>Rapid HIV-1/HIV-2 Ab With P24 Antigen</b>	Rapid HIV, Alere Determination HIV 1/2 Ag/Ab Combo	Qualitative Immunoassay / Immunochromatographic test for simultaneous and qualitative detection of free HIV-1 p24 antigen and antibodies to HIV-1 and HIV-2	Alere Determine	N/A	All nonreactive	N/A	Package Insert	N/A	Reactive / Nonreactive / Presumptive Reactive
<b>Rapid Malaria</b>	Plasmodium	Immunochromatographic membrane assay that uses monoclonal antibodies to qualitatively detect Plasmodium falciparum antigens and pan-malarial antigens (an antigen shared by Plasmodium species causing human malaria)	Abbott Binax NOW	N/A	Negative for Plasmodium antigens	N/A	Package Insert	Limit of detection 100 parasites per microliter	Positive for Plasmodium antigen

Rapid Strep A, Molecular	Rapid Strep, Strep A	Molecular in vitro diagnostic test utilizing isothermal nucleic acid amplification	Abbott	N/A	Negative	N/A	N/A	N/A	Negative / Positive
Rectal Screening for Cipro Resistance	Ciprofloxacin Resistance Screening	Culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SARS-CoV-2 Rapid Antigen	COVID antigen test	Lateral flow immunoassay	Quidel QuickVue SARS Antigen test	N/A	Negative	N/A	Package Insert	N/A	Negative / Positive
SARS-CoV-2 RAPID	Rapid COVID	Isothermal Nucleic Acid Amplification	Abbott	N/A	Not Detected	N/A	Abbott ID NOW Rapid Covid package insert	N/A	Detected / Not Detected
Novel Coronavirus PCR	COVID-19	Real Time PCR	DaSarin	N/A	N/A	N/A	N/A	N/A	Detected / Not Detected
		Transcription Mediated Amplification	Panther	N/A	N/A	N/A	N/A	N/A	Detected / Not Detected
Screen VRE	Vancomycin Resistant Enterococcus Screen	Culture on selective agar	N/A	N/A	Negative for Vancomycin Resistant Enterococcus	N/A	N/A	N/A	N/A
Screen Yeast	N/A	Culture	Braker Daltonics MicroFlex	N/A	Negative	N/A	N/A	N/A	N/A
Screen MRSA - Babu	MRSA	Culture	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Screen MRSA/MSA	Respiratory Staphylococcus Screen, Staph Screen	Real-Time PCR	BD MAX	N/A	Negative	N/A	Package Insert	N/A	N/A
Sterility Check	N/A	Culture	Vitek/Braker Daltonics MicroFlex	N/A	Negative	LOOP	Specimens will be called to the coordinator	N/A	N/A
Strep Pneumoniae Antigen, Urine	N/A	Immunochromatographic membrane assay	N/A	N/A	Negative	N/A	Binax NOW Package Insert	N/A	Negative / Positive
Susceptibility	Susceptibility and Identification	N/A	Vitek/Braker Daltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
Upper Respiratory Culture, Bacterial	Throat Culture, RESN	Culture	Braker Daltonics MicroFlex	N/A	normal flora	N/A	N/A	N/A	N/A
Urine Culture	N/A	Culture; Susceptibility testing performed based on established lab guidelines	N/A	N/A	CFU/mL	Culture includes colony count. Collect time is required for each specimen submission	N/A	N/A	N/A
Varicella Zoster By PCR, Skin	VZVPCR	Real Time PCR	DaSarin	N/A	Not Detected	N/A	Package Insert / Literature	N/A	Detected / Not Detected
ABO / Rh(D) Typing	Blood Type, ABORH	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh Negative	N/A	N/A	N/A	N/A
ABORH Type Recombination	Confirmatory Type	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh negative	N/A	N/A	N/A	N/A
ABORH Not Valid for Transfusion	Blood Type, ABO	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh negative	N/A	N/A	N/A	N/A
Antibody ID	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	N/A	N/A	N/A	N/A	N/A
Antibody Screen	Indirect Antiglobulin Test, AHS	Agglutination	Manual: N/A Automated: Ortho	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Antibody Titer [LAB275]	AHIT	Agglutination	N/A	N/A	Reciprocal of serial dilution	All antigens but K has a critical value of 32, K has a critical value of 8	All communication Committee	N/A	N/A
Antigen Typing, Red Cell Adsorption, RBC	N/A	Agglutination	N/A	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Baby Type and DAT (Direct Antiglobulin Test)	HEELS, Heidelberg Evaluation	Agglutination	N/A	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative, DAT Positive or Negative	Reciprocal of serial dilution	N/A	N/A	N/A
Cold Agglutinin Titer	N/A	Agglutination	N/A	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, DAT Positive or Negative	Reciprocal of serial dilution	N/A	N/A	N/A
Cord Blood Evaluation	N/A	Agglutination	N/A	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, DAT Positive or Negative	Reciprocal of serial dilution	N/A	N/A	N/A
Crossmatch	N/A	Agglutination	N/A	N/A	Compatible, Incompatible, Least incompatible	N/A	N/A	N/A	N/A
Direct Antiglobulin Test (DAT)	DAT, Direct Antiglobulin	Agglutination	N/A	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Donor unit retype	Reconfirmation of donor units	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh Negative	N/A	N/A	N/A	N/A
Elate	Elution, RBC	Agglutination	N/A	N/A	N/A	New antibody identified in Eluate	N/A	N/A	N/A
Fetal Screen Workup	N/A	Agglutination	Immucor	N/A	Negative / Positive	N/A	N/A	N/A	N/A
RHIG Evaluation	Rheum Evaluation	Agglutination	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Transfusion Reaction Battery	N/A	Agglutination	N/A	N/A	All transfusion reactions	N/A	N/A	N/A	N/A
Type and Screen	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
Type and Screen-Not for Transfusion	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
Type and Screen - Pretransmission	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type: A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
AFP Tumor Marker	AFP/PMR, AFP	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	<8.1	N/A	Siemens AFP Package Insert 1095310, EN Rev. 03, 2020-02	2.2-1,000.0	2.2-1,000,000.0
Aldosterone	ALDOS	Chemiluminescent Immunoassay	DaSarin Liaison XL	ng/dL	Utriglit (serum) <39.20 Sunitic (serum) -23.20 Utriglit (EDTA) <35.30 Sunitic (EDTA) <23.60	N/A	Package insert	4.00-100.00	4.00-5,000.00
ANA Multiplex Screen	N/A	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
ANA Multiplex Scrn With Reflex	N/A	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
ANA Screen IFA	ANAB	Indirect Immunofluorescence Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2018 Revision 7	N/A	Negative / Positive
ANA Titer*	ANAT	Indirect Immunofluorescence Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2018 Revision 7	1.80, 1.160, 1.320, 1.640, 1.1280, >12560	N/A
Anti Mitochondrial Antibody	AMA	Indirect Fluorescent Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2019 Revision 21	N/A	Quantitative: Negative / Positive Quantitative: 1.70, 1.40, 1.60, 1.160, >1.170
Anti Neutrophil Cytoplasmic Antibody	ANCA	Indirect Fluorescent Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2019 Revision 3	N/A	Quantitative: Negative / Positive Quantitative: 1.20, 1.40, 1.80, 1.160, 1.320, 1.640, >1.1280
Anti Parietal Antibody	PCA	Indirect Fluorescent Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2019 Revision 21	N/A	Quantitative: Negative / Positive Quantitative: 1.20, 1.40, 1.80, 1.160, >1.1280
Anti Smooth Muscle Antibody	SMA	Indirect Fluorescent Antibody	Werfen/ Inova	N/A	Negative	N/A	INOVA IFU 2019 Revision 21	N/A	Quantitative: Negative / Positive Quantitative: 1.70, 1.40, 1.60, 1.160, >1.170
Anti-Proteinase 3 Ab	Anti PR3	Multiplex ImmunoFlow Assay	Biolex 2200	N/A	Negative is Normal	N/A	Instructions for use manual	N/A	Negative / Positive
Anti-Schistosome Ab (SclTb)	SCLTb	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
Anti Immune Abx, Multiplex	HPAB	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
Beta 2 Microglobulin Serum	B2M	Turbidimetry	The Binding Site Optile	mg/L	0.80-2.34	N/A	Package insert (Insert Code: DSD043.OPTA, Version: 09th August 2018)	0.30-20.00	0.30-40.00
BKR Free Testosterone	N/A	Calculation	Siemens Atellica IM	TESTT - ng/dL, TESTP - %	Male TESTT - 1.74-15.20 Female TESTT - 0.04-0.81 Male TESTP - 0.90-2.80 Female TESTP - 0.40-3.00	N/A	Customer Bulletin	N/A	N/A
Calcitonin	CALCIT, CALC2	Two-Step Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	pg/mL	Male: <13.38 Female: <9.53	N/A	Siemens Calcitonin Package Insert RPH1393R01, EN Rev. 01, 2019-04	1.89-1,800.00	1.89-180,000.00
Contrastance B Antibody	CENIT	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
Chromatin Antibody	N/A	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
CMV IgG Ab	CMVG	Chemiluminescent immunoassay (CLIA)	DaSarin Liaison XL	U/mL	Negative is Normal	N/A	Package insert	N/A	Negative/ Indeterminate/ Positive
CMV IgM Ab	CMVM	Chemiluminescent immunoassay (CLIA)	DaSarin Liaison XL	U/mL	Negative is Normal	N/A	Package insert	N/A	Negative/ Indeterminate/ Positive
C-Peptide	CFEP, CPe	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 5 Minutes	CPM5M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 8 Minutes	CP2E8M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 2 Minutes	CPE2M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 5 Minutes	CP2E5M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 10 Minutes	CP10M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
C-Peptide Tolerance (Part of the Insulin Glucose Tolerance Battery): 30 Minutes	CP30M	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atellica IM	ng/mL	0.81-3.85	N/A	Siemens C-Peptide Package Insert 10997742, EN Rev. 03, 2021-06	0.05-25.00	0.05-5,000.00
Cryptosporal Antigen	CRAG	Lateral Flow Assay	Immuno-Mycologies Inc.	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative / Positive
Cryptosporal Antigen, CSF	CRAG	Lateral Flow Assay	Immuno-Mycologies Inc.	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative / Positive
DHEA-Sulfate	DHEAS, DHEAS	Chemiluminescent Immunoassay	Siemens Atellica IM	ug/dL	Female: 25.90-440.20 Male: 34.50-668.90 Negative: <4	N/A	Siemens DHEAS Package Insert 11200382, EN Rev. 06, 2021-03	3.00-1,500.00	3.00-3,000.00
DS DNA Ab, Quant	N/A	Multiplex flow immunoassay	Biolex 2200	IU/mL	Indeterminate: 5-9 Positive: >10	N/A	Package insert	1-300	1-30,000
dsDNA Antibody	N/A	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
EBV VCA IgG Ab	EBVG	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert	N/A	Negative / Indeterminate / Positive
EBV VCA IgM Ab	EBVM	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert	N/A	Negative / Indeterminate / Positive
ENA Battery	ENAB	Multiplex flow immunoassay	Biolex 2200	N/A	Negative is Normal	N/A	Package insert, testbook	N/A	Negative / Positive
Free Hemoglobin, Plasma	N/A	Photometric	HemoCue	mg/dL	<5.0	N/A	HemoCue Operating Manual	30.0-2,100.0	30.0-Dilute to endpoint

GoFD, Qualitative	GoFD	Visual Fluorescence	Tintly Biocheck	N/A	Enzyme Activity Present is Normal	N/A	Package Insert	N/A	Enzyme Activity Absent, Enzyme Activity Indeterminate, Enzyme Activity Present
<b>Growth Hormone</b>	GRIF	CLIA	DaSorin Liaison XL	ng/mL	Female: 95-88 Male: 51-23	N/A	Package insert (LIAISON® IGH (REF) 310340), EN - 200 007-914, 06 - 2016-101	0.05-80.00	0.05-1600.00
<b>Hemoglobin A1C</b>	A1CB	HPLC	Bio-Rad D.100	%	4.7-5.6 ≥5.0	N/A	Textbook	3.5-15.0	3.5-15.0
<b>Hemoglobin Plasma, Screen</b>	HGBPSC	Photometric	HemoCue	mg/dL		N/A	Operators Manual	30.0-2,100.0	30.0-Dilute to endpoint
<b>Hemoglobin, Fetal</b>	HF	HPLC	Variant II	%	<1.0	N/A	Package Insert, Textbook	1.0-40.0	1.0-40.0
<b>Hemoglobinopathy Eval</b>	Abnormal HGB Detection, HEPB	HPLC	Variant II	%	Hemoglobin A: 95.0 Hemoglobin A2: 2.1-3.3 Hemoglobin F: <1.0 Hemoglobin C: 0.0 Hemoglobin S: 0.0	N/A	Package Insert, Textbook	N/A	N/A
<b>Hep A Ab, Total (IgG-IgM)</b>	HAABG	Competitive Direct Chemiluminescent Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hep B Core Ab, Total (IgG-IgM)</b>	HBCBG	2-Wash Antigen Sandwich Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hep B Surface Antigen</b>	HBSAG	Specific Antibody Neutralization	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis A IgM Ab</b>	HAABM	2-Step IgM Capture Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis B Core IgM Ab</b>	HBCBM	2-Step IgM Capture Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis B Surface Antibody</b>	HBSAB	Sandwich Direct Chemiluminescent Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis B Surface Antigen</b>	HBSAG	Sandwich Direct Chemiluminescent Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis Bc Antibody</b>	HBCAB	Indirect Sandwich Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Hepatitis Bc Antibody</b>	HBCAB	Indirect Sandwich Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>HIV-1 and 2 Antibodies</b>	HIV	Sandwich 2-Step Immunoassay	Siemens Atelica IM	N/A	Nonreactive is Normal	N/A	Package Insert	N/A	Nonreactive/ Reactive
<b>HIV-1/HIV-2 Differentiation</b>	HIV1/2	Immunochromatographic Assay	Bio-Rad Genius	N/A	Nonreactive is Normal	N/A	Package Insert	N/A	Nonreactive/ Reactive
<b>HPV, High Risk, DNA</b>	High Risk HPV with Genotyping	PCR	Roche Cobas x 480	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>HSV 1 And 2 IgG Antibody</b>	HSVIG2	Multiple flow immunoassay	BioPlex 2200	N/A	Negative is Normal	N/A	Textbooks, HSV-1&2 IgG procedure, Package Insert	N/A	Negative/ Indeterminate/ Positive
<b>HSV IgM Antibody</b>	HSVIM	ELISA - Manual	Gold Standard	N/A	Negative is Normal	N/A	Textbooks, HSV-1&2 IgG procedure, Package Insert	N/A	Negative/ Positive/ Equivocal
<b>Immunofluorescence, Serum</b>	SIMFAR, Serum Protein Electrophoresis with Immunofluorescence	Electrophoresis	Sebia Capillary 3	N/A	N/A	N/A	Package Insert	N/A	N/A
<b>Immunoglobulin IgG</b>	IgG, Total	2-site Sandwich Direct Chemiluminescent Immunoassay	Siemens Atelica IM	U/mL	≤165.3	N/A	Reference Range Study 11.3.2016	2.5-3000.0	2.5-3000.0
<b>Insulin</b>	IRI	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 5 Minutes</b>	INSULI	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 8 Minutes</b>	INSUL2	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 9 Minutes</b>	INSUL3	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 10 Minutes</b>	INSUL4	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 10 Minutes</b>	INSUL5	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin Tolerance (Part of the Insulin Glucose Tolerance Battery): 30 Minutes</b>	INSULA	Two-Site Sandwich Immunoassay Chemiluminescent	Siemens Atelica IM	uIU/mL	3.0-25.0	N/A	Siemens Insulin Package Insert 10997752, EN Rev. 05, 2021-06	0.5-300.0	0.5-1,500.0
<b>Insulin-like Growth Factor 1</b>	Somatostatin-C, IGF1	One-step sandwich chemiluminescent immunoassay	DaSorin Liaison XL	ng/mL	Age Dependent	N/A	Package Insert	10.0-1,000.0	10.0-1,000.0
<b>Intact PTH (Intraoperative)</b>	Intact PTH Rapid, RPTH	Two-site sandwich immunoassay	Siemens Atelica IM	pg/mL	14.0-72.0	N/A	Atelica product insert (PTH) REV 4, 2020/11	6.3-2,000.0	6.3-160,000.0
<b>IgG-1 Antibody</b>	ANA Screen	Multiple flow immunoassay	Biolex 2700	N/A	Nonreactive is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>Kappa Free Light Chains</b>	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	mg/L	0.9-26.0	N/A	2017 OSH Study	2.0-127.0	0.6-43,500.0
<b>Kappa Lambda Ratio</b>	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	N/A	0.8-1.1:73	N/A	2017 OSH Study	N/A	N/A
<b>Lambda Free Light Chains</b>	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	mg/L	6.4-22.1	N/A	2017 OSH Study	5.2-139.0	1.3-139,000.0
<b>Legionella Serogroup 1 Urinary Antigen</b>	Legionella Urinary Ag	EIA	Binas Kit	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Lyme Ab</b>	N/A	Chemiluminescent Immunoassay	DaSorin Liaison XL	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>M Tuberculosis By Quantiferon</b>	QFT, M. Tuberculosis Antigen	Direct, sandwich Chemiluminescent immunoassay	DaSorin Liaison XL	N/A	N/A	N/A	Package Insert	N/A	Negative/ Positive/ Indeterminate
<b>Monoclonal Prot Immuns, Serum</b>	Serum Monoclonal Protein	Capillary Electrophoresis	Sebia Capillary 3	N/A	Negative is Normal	N/A	Package Insert	N/A	N/A
<b>Mumps IgG Ab, Immune Status</b>	Mumps Ab, IgG	Multiple flow immunoassay	BioPlex 2200	N/A	Positive	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	Negative-The absence of detectable IgG-class antibodies to measles, mumps
<b>Myceloperoxidase Antibodies</b>	N/A	Multiple ImmunoFlow Assay	Biolex 2700	N/A	Nonreactive is Normal	N/A	Instructions for use manual	N/A	Negative/ Positive
<b>Protein Electrophoresis</b>	Serum Electrophoresis, PSE, Serum Protein Electrophoresis with Reflex to Immunofluorescence	Electrophoresis	Sebia Capillary 3	g/dL	Albumin: 3.5-5.0 g/dL Alpha 1: 0.2-0.4 g/dL Alpha 2: 0.5-1.0 g/dL Beta: 0.5-1.1 g/dL Gamma: 0.6-1.5 g/dL	N/A	Package Insert	N/A	N/A
<b>PTH Intact</b>	IPTH	Two-site sandwich immunoassay	Siemens Atelica IM	pg/mL	14.0-72.0	N/A	Atelica product insert (PTH) REV 4, 2020/11	6.3-2,000.0	6.3-160,000.0
<b>Quant. Cryptosporus Antigen, Blood</b>	N/A	Lateral Flow Assay	Immuno-Mycologies Inc.	N/A	Negative is Normal	N/A	Package Insert	N/A	1.2-12,560
<b>Quantitative RPR</b>	N/A	Macroscopic nontreponemal flocculation	ASI	N/A	Nonreactive / Reactive	N/A	Package insert	N/A	1:1-1:2048
<b>Resin</b>	Resin, Direct	Chemiluminescent Immunoassay	DaSorin Liaison XL	pg/mL	Ulight: <40: 2.5-3.2 ≥40: 3.6-81.6 Slight: <41: 3.2-33.2 ≥40: 2.5-45.1	N/A	Package insert	2.1-300.0	2.1-3,000.0
<b>Ribosomal P Antibody</b>	RIBOPT	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>RNP Antibody</b>	RNPPT	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>RPR</b>	Rapid Plasma Reagin	Macroscopic nontreponemal flocculation	ASI	N/A	Nonreactive / Reactive	N/A	Package insert	N/A	1:1-1:2048
<b>RPR - Baby</b>	RPR, Neonatal	Macroscopic nontreponemal flocculation	ASI	N/A	Nonreactive / Reactive	N/A	Package insert	N/A	1:1-1:2048
<b>RPR with Titer</b>	RPR, Therapy	Macroscopic nontreponemal flocculation	ASI	N/A	Nonreactive / Reactive	N/A	Package insert	N/A	1:1-1:2048
<b>Rubella Immune Status IgG Antibody</b>	RUBAB	Multiple flow immunoassay	BioPlex 2200	N/A	Negative / Positive	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	Negative-The absence of detectable IgG-class antibodies to measles, mumps
<b>Rubella IgG Ab (Immune Status)</b>	RUBOB	Multiple flow immunoassay	BioPlex 2200	N/A	Negative / Positive	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	Negative-The absence of detectable IgG-class antibodies to measles, mumps
<b>SARS-CoV-2 Spike Protein Antibody</b>	SARS-CoV-2, COVID-19 IgG	Chemiluminescent immunoassay (CLIA)	DaSorin Liaison XL	AU/mL	Negative is normal Male: 10.00-57.00 Female (non-pregnant): 18.00-144.00	N/A	Package insert	1.85-800.00	1.85-800.00
<b>Sex Hormone Binding Globulin</b>	SHBG	Sandwich Immunoassay	Siemens Atelica IM	nmol/L	Female (non-pregnant): 18.00-144.00	N/A	Siemens IMMULITE 2000 SHBG (PH2KSH-20, 2018-03-15)	1.60-180.00	1.60-360.00
<b>Sickle Cell Screen</b>	Sickle Hemoglobin Solubility	Modified Naibandan Procedure-Solubility	SickleScreen® Sicking Hemoglobin Screening Kit	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>Sm Antibody</b>	Smith Antibody	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>SS-RNP Antibody</b>	SSA Antibody	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>SS-A/Ro Antibody</b>	SSA Antibody	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>SS-B/LA Antibody</b>	SSB Antibody	Multiple flow immunoassay	Biolex 2700	N/A	Negative is Normal	N/A	Package insert, textbook	N/A	Negative/ Positive
<b>Syphilis Ab w/Reflex RPR</b>	Syphilis IgG/IgM Antibody with Reflex RPR	Direct sandwich assay	Siemens Atelica IM	N/A	Nonreactive is Normal	N/A	Package insert	N/A	Nonreactive/ Equivocal/ Reactive
<b>Toxoplasma IgG Antibody</b>	TOXOG	Sandwich Direct Chemiluminescent Immunoassay	Siemens Atelica IM	N/A	Negative is Normal	N/A	Package Insert	N/A	Negative/ Positive
<b>Urine Immunofluorescence - 24 Hour</b>	Monoclonal Prot Immf, Urine - 24 Hour, UIMFXI	Electrophoresis	Sebia Hydrays 2	N/A	Negative is Normal	N/A	Package Insert	N/A	N/A
<b>Urine Immunofluorescence, Random</b>	Monoclonal Prot Immf, Urine - Random, UIMFXR	Electrophoresis	Sebia Hydrays 2	N/A	N/A	N/A	Package Insert	N/A	N/A
<b>Varicella IgG Ab (Immune Status)</b>	VZVSB	Multiple flow immunoassay	BioPlex 2200	N/A	Positive is Normal	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	Negative/ Indeterminate/ Positive
<b>Vitamin D (25-Hydroxy Total)</b>	Vitamin D, Total	Immunoassay Chemiluminescent	DaSorin Liaison XL	ng/mL	30.0-100.0	N/A	DiaSorin	4.0-150.0	4.0-150.0
<b>Vitamin D (1,25 Dihydroxy)</b>	1,25 Dihydroxy Vitamin D	In vitro chemiluminescent immunoassay	DaSorin Liaison XL	pg/mL	20.0-79.0	N/A	Package Insert	5.0-180.0	5.0-540.0
<b>1P19Q (Glioma) FISH</b>	1p19q - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Not Detected	N/A	N/A	N/A	In loss, FISH Detected, Not Detected, Not Indicated, Indeterminate
<b>FISH, 3p (tumor), Sign-out</b>	3p3q - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Not Detected	N/A	N/A	N/A	Chr 3p loss Detected, Not Detected, Not Indicated, Indeterminate
<b>ALK Rearrangement</b>	ALK - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative	N/A	N/A	N/A	Positive/Negative
<b>BCL2 FISH</b>	BCL2 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative	N/A	N/A	N/A	Positive/Negative
<b>BCL6 FISH</b>	BCL6 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative	N/A	N/A	N/A	Positive/Negative

BCR-ABL1 (T92J), QUANT	BCR-ABL1, T92J, CML	Real Time PCR	7500 Fast Dx	% BCR-ABL1/ABL1	P190 transcript: Not Detected P210 transcript: Not Detected BCR-ABL1/ABL1 %: n/1000	N/A	N/A	0.000-100.000	0.000-100.000
Chor72 Hexanucleotide Repeat Analysis	N/A	Fragment analysis with reflex to agarose gel electrophoresis for expanded alleles >145 repeat	Astargen	# of Hexanucleotide repeats	2-19	N/A	Testing control specimens and published literature	<= 1 hexanucleotide repeat for normal range	2 repeats through thousands of hexanucleotide repeats
Hairy Cell Leukemia BRAF V600E Mutation	BRAF, BRAF V600E	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Qiagen Pyromark	N/A	LABRAF: Not Detected LABRAF1HC: Not Detected LABRAF1EM: <5% Not Detected	N/A	N/A	0-100	LABRAF Mutation: Detected, Not Detected, Not Indicated, Indeterminate
BTk and PLCG2, Comprehensive Mutation Profile	BTk and PLCG2 Full Sequencing	Next Generation Sequencing	Ion Torrent S5	N/A	Not Detected	N/A	N/A	0-100	Detected/Not detected
BTk Resistance Mutation	BTkR C481S	Allele-specific digital droplet polymerase chain reaction (AS-ddPCR)	BioRad	%	<0.1% Not Detected	N/A	Validation	0-100	Detected/Not detected
Calr Mutation Analysis, Myeloproliferative Neoplasm MPN	Calreticulin Mutation Detection	Fluorescent fragment analysis, sequence analysis (non-NGS)	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
FISH, CCND1 (cyclin D1) Rearrangement, Sim-out	CCND1 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
MAML2 Rearrangement	MFC, mucocutaneous	Fluorescent In Situ Hybridization	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CEBPA Mutation	CEBPA alpha, CEBPAa	Sequence analysis (non-NGS), fluorescent fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
FISH, DDIT3 (CHOP) Rearrangement	CHOP - FISH, DDIT3 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
Comprehensive Hematology Panel with Germline Assessment	550+ Gene Panel, Extended NGS Home Panel	Next Generation Sequencing	Illumina NextSeq	N/A	Negative for pathogenic mutation at the target VAF level	N/A	N/A	N/A	N/A
Comprehensive Tumor Genomic Profile with MSI Status	Large panel NGS, Tumor NGS, TMB, CIPNGS	Next Generation Sequencing	Illumina NextSeq	N/A	N/A	N/A	N/A	N/A	N/A
FISH, MET Amplification, Sim-out	CME1 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
Colon Cancer Mutation Panel, Sim-out	COLMO1	Next Generation Sequencing	Ion Torrent S5	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
EGFR Mutation Analysis (exons 19 & 21), Sim-out	Epidermal growth factor receptor, L858R, exon 19, exon 21	Fluorescent fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
FISH, EGFR Amplification (t(8q24), Sim-out)	EGFR - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Not detected	N/A	N/A	N/A	Detected, Not Detected, Not Indicated, Indeterminate
Extended RAS Mutation Panel, Sim-out	XRAS	Pyrosequencing	Pyromark	N/A	Not detected	N/A	N/A	0-100	Detected, Not Detected, Not Indicated
FISH, EWSR1 Rearrangement, Sign-out	EWSR1 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
Factor V Mutation F5C1 Leiden	Leiden, G1691A, R506Q	Fluorescent Capillary Fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR system + Genetic Analyzer	N/A	Not detected Heterozygous + Homozygous	N/A	Gene Reviews	N/A	Not detected Heterozygous + Homozygous
FLT3, ITD & TK Mutation	FLT3	PCR and capillary electrophoresis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
Hematologic Neoplasm/Disorder Mutation Panel	LMPNGS, MYLNGS, T-cell mutation, T-LGL mutation, CLL mutation panel	Next Generation Sequencing	LifeTech S5	N/A	N/A	N/A	N/A	0.5% VAF	0.5-100.0% VAF
Hereditary Hemochromatosis, (Gene Analysis, Common Variants)	HFE, C28Y, H63D, Iron Overload Disease	PCR	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	N/A	N/A	N/A	N/A	N/A
FISH, HER2, Sign-out	HER-2, HER2/neu, neu	Fluorescent In Situ Hybridization	Biowest	N/A	N/A	N/A	N/A	N/A	GE Positive, Negative, Indeterminate Fusion: Positive, Negative
Huntington's Disease	Huntington chorea, HTT Gene	Polymerase chain reaction, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Normal Allele; Normal Mutable Allele; HD Allele with reduced penetrance; HD Allele with full penetrance	N/A	Gene Reviews	N/A	Normal Allele; Normal Mutable Allele; HD Allele with reduced penetrance; HD Allele with full penetrance
IDH1 and IDH2 Mutations	IDH1	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Qiagen Pyromark	N/A	Not detected	N/A	Normal controls	0-100	Detected/Not detected
B Cell Gene Rearrangement	IGH gene rearrangement, B cell Clonality, Igh PCR	Polymerase Chain Reaction	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative	N/A	N/A	N/A	Positive/Negative
IGVH Mutation Analysis	IGH mut sequencing, IGVH Ig mutation analysis, CLL IGVH	Clonal amplification, fluorescent fragment analysis, sequence analysis (non-NGS)	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	N/A	N/A	N/A	N/A	mutated/unmutated
JAK2 V617 Mutation Detection	JAK	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Genetic Analyzer Qiagen Pyromark	N/A	<1% Not detected	N/A	N/A	0-100	Detected/Not detected
KIT D816V Mutation Detection	KIT, CD117, PBT, SCFR	Allele-specific digital droplet polymerase chain reaction (AS-ddPCR)	BioRad	%	<0.01% Not Detected	N/A	Validation	0-100	Detected/Not detected
Lane Cancer Mutation Panel	PULMO1	Next Generation Sequencing	Ion Torrent S5	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
FISH, MALT1 Rearrangement, Sign-out	MALT1 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
FISH, MDM2 Amplification, Sign-out	MDM2 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Not detected	N/A	N/A	N/A	Detected/Not detected
MTFR (Methylene Tetrahydrofolate Red)	NADPH1:677C - MTFR	PCR-based restriction fragment polymorphism	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	Gene Reviews	N/A	Not Detected, Heterozygous positive, Homozygous positive
MGMT Promoter Methylation, Tumor	MGMT1, O6-Methylguanine DNA methyltransferase	Pyrosequencing	Pyromark + Applied Biosystems GeneAmp PCR System	N/A	N/A	N/A	N/A	N/A	Hypemethylated / Not Hypemethylated
MLH1 Promoter Methylation	MLH1, Lynch syndrome, HNPCC	Bisulfite modification / Pyrosequencing	Applied Biosystems GeneAmp PCR System + Genetic Analyzer Qiagen Pyromark	N/A	N/A	N/A	N/A	N/A	Hypemethylated / Not Hypemethylated
Microsatellite Instability (MSI) Analysis, Tumor	MSI mismatch repair, HNPCC, non-polyposis colon cancer, MMR, Lynch syndrome	multiplex polymerase chain reaction, fluorescent fragment analysis	Applied Biosystems GeneAmp PCR System + Thermal Cycler, PCR System	N/A	N/A	N/A	N/A	N/A	MSI-S, MSI-L, MSI-H
MPL Mutation Analysis, MYC FISH	TPOR, CD11b, THPOB, MYC - FISH	Pyrosequencing Fluorescent In Situ Hybridization	Qiagen Biowest	% N/A	0 Negative	N/A	Validation N/A	0% N/A	0% Positive/Negative
MYD88 Mutation Analysis, Quant	N/A	Allele-specific digital droplet polymerase chain reaction (AS-ddPCR)	BioRad	%	<0.1% Not Detected	N/A	Validation	0-100	Detected/Not detected
Myotonic Dystrophy	DMPK Gene	Polymerase chain reaction, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	Repeats	<34 Negative	N/A	Gene Reviews	5-1500	5-1500 Negative; Premutation; Full Mutation
NPM1 Mutation Analysis, Quant	nucleophosmin, NPM exon 12 mutation	Allele-specific digital droplet polymerase chain reaction (AS-ddPCR)	BioRad	%	<0.1% Not Detected	N/A	Validation	0-100	Detected/Not detected
NRAS Mutation	NRAS codon 12, 13, 61	Pyrosequencing	Applied Biosystems GeneAmp PCR system + Qiagen Pyromark	N/A	Not detected	N/A	N/A	0-100	Detected/Not detected
NTRK Fusion Panel	NTRK1, NTRK2, NTRK3	Next generation sequencing	N/A	N/A	Not Detected	N/A	Validation	N/A	Detected/Not detected
FISH, NUTM1 Rearrangement	NUT1, Medline Carcinoma	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
Oral Rinse Sample (Molecular)	NGS normal, molecular normal, comprehensive genomic panel	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pancreatic Fluid, Mutation Analysis, Request	cyst fluid mutation analysis	Next Generation Sequencing	Ion GeneStudio	N/A	Not Detected	N/A	N/A	0-100	Detected, Not Detected
PIK3CA Mutation Analysis, Request	N/A	Pyrosequencing	Pyromark	% mutation	Not Detected	N/A	Testing specimens from normal, healthy controls	0-100	Detected, Not Detected, Indeterminate
Prothrombin A21120G Mutation	G20210A, Prothrombin Mutation	Fluorescent capillary fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR system + Genetic Analyzer	N/A	Not detected	N/A	Gene Reviews	N/A	Not Detected, DETECTED, long form transcript, DETECTED, short form transcript
PML-RARA, APL, Quant PCR	15;17, PML, APL, retinoic acid	Real-time PCR	ABI Fast 7500	NCN = % PML-RARA/ABL1	0.001 Diagnostic 0.0001 MRD	N/A	Blood samples with no history of AML-M3	NCN > 1	Not Detected, DETECTED, long form transcript, DETECTED, short form transcript
RET Rearrangement	RET FISH - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
ROS1 Rearrangement	ROS1 - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
SMN1/SMN2 DNA Sequencing	Survival of Motor Neuron 1 (SMN1)	PCR, chain-termination sequencing, capillary electrophoresis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not Detected	N/A	Gene Reviews	N/A	Detected/Not detected
Spinal Muscular Atrophy Dosage - Carrier Study	SMA Carrier test, SMA compound heterozygote testing, SMN1 gene	Semi-quantitative PCR, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	SMN1: 2-5 copies SMN2: 10-5 copies	N/A	Gene Reviews	N/A	0-5 copies
Spinal Muscular Atrophy - Diagnostic	Wendling-Hoffman, Kugelberg-Welander, SMN1 gene	Semi-quantitative PCR, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	SMN1: 2-5 copies SMN2: 10-5 copies	N/A	Gene Reviews	N/A	0-5 copies
Tumor Hotspot Mutation Panel	Solid Tumor Mutation Panel (Cancer Hotspot)	Next Generation Sequencing	Ion Torrent S5	N/A	Not Detected	N/A	N/A	0-100	Detected/Not detected
FISH, SS18 (SVT) Rearrangement, Sim-out	SVT-FISH, SS18-FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
T Cell Receptor Gene Rearrangement	T-cell clonality, TCR beta, T-cell PCR	Polymerase Chain Reaction	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative	N/A	N/A	N/A	negative / oligoclonal / clonal TCRB rearrangements
TCRG, PCR	T-cell clonality, TCR gamma, T-cell PCR	Polymerase Chain Reaction	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Polyclonal pattern	N/A	N/A	N/A	Polyclonal pattern, Predominantly polyclonal pattern with minimal skewing, Monoclonal, Monoclonal on polyclonal background, Oligoclonal with dominant peaks, Oligoclonal with multiple peaks, Biallelic biclonal, Low clonal on polyclonal background, low levels of amplification seen with adequate controls, Low levels of amplification seen with suboptimal controls, No amplification, Poor quality or limited nucleic acid
UBA1 M41T Mutation Detection	UBE1, UBE1X, POC20, CFAP124, A159T	Allele-specific digital droplet polymerase chain reaction (AS-ddPCR)	BioRad	%	<0.1% Not Detected	N/A	Validation	0-100	Detected/Not detected
FISH, XY, Sim-out	XY FISH - FISH	Fluorescent In Situ Hybridization	Biowest	N/A	Negative	N/A	N/A	N/A	Positive/Negative
CD4	Thymocyte	Flow Cytometry	Nexus Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%



