Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Summary

New Test Activation	1/6/2026	CUZNP - "Copper/Zinc, Serum/Plasma"
Update Existing Test	1/5/2026	ALZEC - "Admark Alzheimer's Evaluation, CSF"
Update Existing Test	1/5/2026	C5F - "C5 Complement, Functional"
Update Existing Test	1/5/2026	C6 - "C6 Complement, Functional, Serum"
Update Existing Test	1/5/2026	C7FX - "C7 Complement, Functional, Serum"
Update Existing Test	1/5/2026	C8FX - "C8 Complement, Functional, Serum"
Update Existing Test	1/5/2026	C9FX - "C9 Complement, Functional, Serum"
Update Existing Test	1/20/2026	CADEP - "Cadmium Exposure Panel-OSHA"
Update Existing Test	1/20/2026	HBDAB - "Hepatitis Delta Antibody"
Update Existing Test	1/20/2026	NICRU - "Nickel, Urine"
Update Existing Test	1/5/2026	PMPCR - "PML-RARA t(15;17), Quantitative RT-PCR"
Update Existing Test	1/20/2026	PRINS - "Proinsulin, Intact"
Update Existing Test	12/19/2025	SELP – “Selenium, Serum/Plasma”
Update Existing Test	1/20/2026	UCADA - "Cadmium Urine"
Update Existing Test	1/20/2026	UMERA - "Mercury, 24 Hour Urine"
Update Existing Test	1/20/2026	UMERR - "Mercury, Random Urine"
Update Existing Test	1/20/2026	UPBA - "Lead, Urine"
Update Existing Test	1/20/2026	UPBR - "Lead, Random Urine"
Update Existing Test	1/12/2026	UPHEP - "Phenol Exposure, Urine"
Inactivate Test With Replacement	1/6/2026	ADABR - "Adrenal Antibody Screen with reflex to Titer" replaced by 21HYD - "21-Hydroxylase Ab, Serum"
Inactivate Test With Replacement	1/13/2026	B27 - "HLA-B27 Screening" replaced by B27M - "HLA-B27 Identification by PCR"
Inactivate Test With Replacement	1/20/2026	CHC - "Chlamydia Culture" replaced by CSC - "Chlamydiae Species Culture"
Inactivate Test With Replacement	1/19/2026	PN14S - "Pneumococcal Antibody Panel (14 Serotype)" replaced by PN15S - "Pneumococcal Antibody Panel - PCV15 (15-serotype)"
Inactivate Test With Replacement	1/12/2026	UDEXM - "Dextromethorphan and Metabolite Ratio - Total, Urine" replaced by UDLMR - "Dextromethorphan/Levomethorphan & Metabolite Ratio-Total, U"
Inactivate Test With Replacement	1/20/2026	UGT1A - "UGT1A1 Genotyping" replaced by UGTG - "UDP Glucuronosyltransferase 1A1 (UGT1A1) Genotyping"
Inactivate Test Without Replacement	1/26/2026	ANPHP - "Anaplasma phagocytophilum Ab IgG IgM"
Inactivate Test Without Replacement	1/26/2026	APECV - "Anaplasma phagocytophilum Ehrlichia chaffeensis AB IgG, IgM"
Inactivate Test Without Replacement	1/26/2026	BAGMQ - "Babesia microti Antibodies (IgG, IgM), IFA"
Inactivate Test Without Replacement	1/26/2026	ECGMV - "Ehrlichia chaffeensis Ab IgG IgM"
Inactivate Test Without Replacement	1/20/2026	VWPAR - "Von Willebrand Panel"

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

New Test Activation

Effective Date	1/6/2026
Name	Copper/Zinc, Serum/Plasma
Code	CUZNP
CPT Code(s)	82525
Notes	New York DOH Approval Status: No

Specimen Requirements

Specimen Required	*Collect:* Dark blue trace element no additive *Specimen Preparation:* Centrifuge, separate serum from cells within 2 hours by carefully pouring 2.0 mL serum into a screw capped plastic vial. Do not pipette serum or plasma. Do not ream with wooden stick. *Minimum Volume:* 1.0 mL *Transport Temperature:* Refrigerated
Alternate Specimen	Plasma: Dark blue trace element EDTA
Rejection Criteria	Gross hemolysis, Gel barrier tubes, serum or plasma not separated from cells within 2 hours.
Stability	Copper, Serum/Plasma Room temperature: 7 days Refrigerated: 14 days Frozen: 30 days Zinc, Serum/Plasma: Room temperature: 24 hours Refrigerated: 7 days Frozen: 14 days

Performing Information

Methodology	Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)
Reference Range	Copper, Serum/Plasma: Male: 70 - 140 µg/dL Female: 70 - 160 µg/dL Zinc, Serum/Plasma: 50 - 150 µg/dL
Performed Days	Monday - Friday
Turnaround Time	2 - 5 days
Performing Laboratory	Warde Medical Laboratory

Interface Information

Legacy Code	CUZNP
Interface Order Code	3000941

Result Code	Name	LOINC Code	AOE/Prompt
3000426	Copper, Serum/Plasma	5631-7	No
3000418	Zinc, Serum/Plasma	5763-8	No

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT

WX0000000237 F 12/05/1988

Collected: 11/03/2025 10:00 Received: 11/03/2025 10:00

Test Name	Result	Flag	Ref-Ranges	Units	Site
Copper, Serum/Plasma	75.00		70.0-160.0	ug/dL	WMRL

Copper values may be elevated to twice the normal levels in pregnancy.

Elevated results may be due to sample collected in a non-certified trace element-free tube.

This test was developed and the performance characteristics determined by Warde Medical Laboratory. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high-complexity testing. This test is used for patient testing purposes. It should not be regarded as investigational or for research.

Performing Site:
WMRL: Warde Medical Laboratory 300 West Textile Road Ann Arbor MI 48108 (800)876-6522

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL,

Report Date: 11/03/2025 10:03

E303000002 Ordered By:CLIENT C CLIENT, MD WMB-25-3753

WX0000000237 WX00000000000511

Kajal V. Sitwala, MD, PhD - Medical Director

Printed D&T: 11/3/2025 10:04 AM

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT

WX0000000158 M 07/08/1968

Collected: 09/18/2025 08:17 Received: 09/18/2025 08:17

Test Name	Result	Flag	Ref-Ranges	Units	Site
Zinc, Serum/Plasma	50.00		50.0-150.0	ug/dL	WMRL

Elevated results may be due to sample collected in a non-certified trace element-free tube.

This test was developed and the performance characteristics determined by Warde Medical Laboratory. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high-complexity testing. This test is used for patient testing purposes. It should not be regarded as investigational or for research.

Performing Site:
WMRL: Warde Medical Laboratory 300 West Textile Road Ann Arbor MI 48108 (800)876-6522

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL,

Report Date: 09/18/2025 08:22

E118000004 Ordered By:CLIENT C CLIENT, MD WMB-25-3518

WX0000000158 WX00000000000260

Kajal V. Sitwala, MD, PhD - Medical Director

Printed D&T: 9/18/2025 8:23 AM

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/5/2026
Name	Admark Alzheimer's Evaluation, CSF
Code	ALZEC
Interface Order Code	3401103
Legacy Code	ALZEC
Notes	Update to specimen requirements.
Required Testing Changes	
Specimen Required	*Collect:* Cerebrospinal fluid (CSF) ***Specimen Preparation:*** **Send 2.5 Cerebrospinal fluid (CSF) in a screw capped polypropylene vial.** ***Minimum Volume:*** **1.0 mL** *Transport Temperature:* Refrigerated

Update Existing Test	
Effective Date	1/5/2026
Name	C5 Complement, Functional
Code	C5F
Interface Order Code	3804760
Legacy Code	C5FM
Notes	Update to methodology and reference range.
Required Testing Changes	
Methodology	**Turbidimetric Measurement of Liposome Lysis**
Reference Range	**> or = 39 U/mL**

Update Existing Test	
Effective Date	1/5/2026
Name	C6 Complement, Functional, Serum
Code	C6
Interface Order Code	3501000
Legacy Code	C6
Notes	Update to methodology and reference range.
Required Testing Changes	
Methodology	**Turbidimetric Measurement of Liposome Lysis**
Reference Range	**> or = 56 U/mL**

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/5/2026
Name	C7 Complement, Functional, Serum
Code	C7FX
Interface Order Code	3800334
Legacy Code	C7FX
Notes	Update to methodology and reference range.
Required Testing Changes	
Methodology	**Turbidimetric Measurement of Liposome Lysis**
Reference Range	**> or = 58 U/mL**

Update Existing Test	
Effective Date	1/5/2026
Name	C8 Complement, Functional, Serum
Code	C8FX
Interface Order Code	3800336
Legacy Code	C8FX
Notes	Update to methodology and reference range.
Required Testing Changes	
Methodology	**Turbidimetric Measurement of Liposome Lysis**
Reference Range	**> or = 57 U/mL**

Update Existing Test	
Effective Date	1/5/2026
Name	C9 Complement, Functional, Serum
Code	C9FX
Interface Order Code	3800337
Legacy Code	C9FX
Notes	Update to methodology and reference range.
Required Testing Changes	
Methodology	**Turbidimetric Measurement of Liposome Lysis**
Reference Range	**> or = 60 U/mL**

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/20/2026
Name	Cadmium Exposure Panel-OSHA
Code	CADEP
Interface Order Code	3687700
Legacy Code	CADEXP
Notes	Update to specimen requirements, stability, rejection criteria, methodology and reference range.
Required Testing Changes	
Specimen Required	*Patient Preparation:* To avoid contamination, please collect specimens at the beginning of work shift. Blood and urine should be collected the same day. Urine: diet, medication and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals and nonessential over-the-counter medications (upon the advice of their physician). High concentrations of iodine may interfere with elemental testing. Collection of urine specimens from patients receiving iodinated or gadolinium-based contrast media should be avoided for a minimum of 72 hours post-exposure. Collection from patients with impaired kidney function should be avoided for a minimum of 72 hours post-exposure. Collection from patients with impaired kidney function should be avoided for a minimum of 14 days post contrast media exposure. ***Collect:*** **Dark blue K2EDTA** and minimum 40 mL urine ***Specimen Preparation:*** **Cadmium, Blood: Draw blood in a dark blue K2EDTA. Send 3.0 mL whole blood in original collection tube or a blue-capped ARUP metal-free screw capped plastic vial.** Urine: Collect 40.0 mL random urine **Cadmium, Urine: Send 7.0 mL urine from original urine collection in a blue-capped ARUP metal-free screw capped plastic vial labeled "Cadmium".** **Creatinine, Urine: Send 2.0 mL urine from original urine collection in an screw capped plastic vial labeled "creatinine".** **B-2-Microglobulin, Urine: Send 3.0 mL urine aliquot from original urine collection, adjusted to pH 6 - 8 using 1M HCl or 5% NaOH, frozen in an screw capped plastic vial, labeled B2M. Freeze within one hour of collection.** *Minimum Volume:* 0.5 mL blood/0.5 mL for each urine ***Transport Temperature:*** **Blood: Refrigerated** **Urine for Beta-2-Microglobulin: Frozen** **Urine for Cadmium: Refrigerated** **Urine for Creatinine: Refrigerated**
Rejection Criteria	**Blood - Specimens collected in tubes other than Dark Blue K2EDTA or Royal Blue Sodium heparin.** Clotted specimens Cadmium, Urine - Specimens not in blue-capped ARUP metal-free vials Specimens containing blood or fecal material

	Specimens collected within 72 hours after administration of iodinated or gadolinium-based contrast media
Stability	**Cadmium, Blood:** **Room temperature: Indefinitely** **Refrigerated: Indefinitely** **Frozen: Unacceptable** Cadmium, Urine: Room temperature: 7 days Refrigerated: 14 days Frozen: 1 year **Creatinine, Urine:** **Room temperature: 24 hours** **Refrigerated: 30 days** **Frozen: 6 months** Beta-2-Microglobulin, Urine: Room temperature: 8 hours Refrigerated: 2 days Frozen: 60 days
Methodology	**Quantitative Inductively Coupled Plasma - Mass Spectrometry/Spectrophotometry/Chemiluminescent Immunoassay**
Reference Range	**Beta-2-Microglobulin, ratio to CRT: 0-300 µg/g CRT** **Beta-2-Microglobulin, Urine: 0-300 µg/L** **Cadmium, Urine - per volume: <= 1.0 µg/L** **Cadmium, Urine - ratio to CRT <= 3.0 µg/g CRT** **Cadmium, Whole blood: <= 5.0 µg/L**

Update Existing Test

Effective Date	1/20/2026
Name	Hepatitis Delta Antibody
Code	HBDAB
Interface Order Code	3685320
Legacy Code	HBDABAR
Notes	Update to alternate specimen, rejection criteria, stability, and methodology.
Required Testing Changes	
Alternate Specimen	**Plasma: Light blue sodium citrate, lavender EDTA, green sodium or lithium heparin**
Rejection Criteria	Hemolyzed or lipemic specimens, room temperature specimens. **Specimens containing particulate material or obvious microbial contamination.**
Stability	**Room temperature: 24 hours** Refrigerated: 5 days **Frozen: 30 days (avoid repeated freeze/thaw cycles)**
Methodology	**Qualitative Enzyme Immunoassay (EIA)**

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/20/2026
Name	Nickel, Urine
Code	NICRU
Interface Order Code	3600183
Legacy Code	NICRU
Notes	Update to specimen requirements, rejection criteria, and reference range.
Required Testing Changes	
Specimen Required	*Patient Preparation:* Patients are encouraged to discontinue nutritional supplements, vitamins, minerals and non-essential over the counter medication. Abstinence from iodine - containing medications or contrast agents for at least 1 month prior to **collecting specimens for elemental testing** is recommended. *Collect:* 24-hour urine *Specimen Preparation:* Collect 24-hour urine, refrigerate during collection. Send 8.0 mL urine in a blue capped ARUP metal-free screw capped plastic vial. Record total volume and collection time interval on container. *Minimum Volume:* 1.0 mL *Transport Temperature:* Refrigerated
Rejection Criteria	**Acid preserved urine, specimens contaminated with blood or fecal material, urine collected within 48 hours of gadolinium administration (contrast media), specimens received in non-metal free tubes.**
Reference Range	Creatinine, Urine - 24h See report **Nickel, Urine - per 24h <=14.9 µg/d** **Nickel, Urine - per volume <= 10.4 µg/L** **Nickel, Urine - ratio to CRT <= 9.9 µg/g CRT**

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/5/2026
Name	PML-RARA t(15;17), Quantitative RT-PCR
Code	PMPCR
Interface Order Code	3427400
Legacy Code	PMPCR
Notes	Update to specimen requirements, alternate specimen, rejection criteria, stability, performed days, and turnaround time.
Required Testing Changes	
Specimen Required	*Collect:* Lavender EDTA *Specimen Preparation:* Send 5.0 mL whole blood in original collection tube. ***Minimum Volume:*** **Bone Marrow: 1.0 mL; Whole blood: 3.0 mL** *Transport Temperature:* Room temperature
Alternate Specimen	**Bone marrow: Lavender EDTA, ACD solution A or B, sodium heparin (3.0 mL)** **Whole blood: ACD solution A or B, sodium heparin**
Rejection Criteria	**Clotted sample frozen sample**
Stability	**Room temperature: 5 days** **Refrigerated: 5 days** Frozen: Unacceptable
Performed Days	**Monday - Saturday**
Turnaround Time	**7 - 9 days**

Update Existing Test	
Effective Date	1/20/2026
Name	Proinsulin, Intact
Code	PRINS
Interface Order Code	3681100
Legacy Code	PROINSARP
Notes	Update to specimen requirements and alternate specimen.
Required Testing Changes	
Specimen Required	***Patient Preparation:*** **Patient must fast 10 - 12 hours before collection.** *Collect:* Serum separator tube (SST) ***Specimen Preparation:*** **Centrifuge, separate serum from cells within 2 hours and send 1.0 mL serum or plasma in a screw capped plastic vial. CRITICAL FROZEN.**
Alternate Specimen	**Plasma: Lavender (K2EDTA) or pink (K2EDTA)** Serum: Red top

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	12/19/2025
Name	Selenium, Serum/Plasma
Code	SELP
Interface Order Code	3000421
Legacy Code	SELP
Notes	Update to reference range.
Required Testing Changes	
Reference Range	**5.0 – 16.0 µg/dL**

Update Existing Test	
Effective Date	1/20/2026
Name	Cadmium Urine
Code	UCADA
Interface Order Code	3671370
Legacy Code	UCADARP
Notes	Update to specimen requirements, rejection criteria, methodology, and reference range.
Required Testing Changes	
Specimen Required	*Patient Preparation:* Patients should be encouraged to discontinue vitamins, nutritional supplements and nonessential over-the-counter medications. High concentrations of iodine may interfere with elemental testing. Abstinence from iodine-containing medications or contrast agents is recommended at least 1 month before sample collection. *Collect:* 24-hour urine, refrigerate during collection ***Specimen Preparation:*** **Mix urine well and send 8.0 mL urine in a blue capped ARUP metal-free screw capped plastic vial. Record total volume and collection time interval on transport tube.** *Minimum Volume:* 1.0 mL *Transport Temperature:* Refrigerated
Rejection Criteria	Acid preserved urine. Urine collected within 48 hours after administration of a gadolinium containing contrast media. **Specimen contaminated with blood or fecal material. Specimens transported in non-trace element free transport tube.**
Methodology	**Quantitative Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)**
Reference Range	**Cadmium, Urine - per volume: <= 1.0 µg/L** **Cadmium, Urine (24-hour): <= 3.2 µg/d** **Cadmium Urine- ratio to CRT: <= 3.2 µg/g CRT** Creatinine (24-hour): See Report

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/20/2026
Name	Mercury, 24 Hour Urine
Code	UMERA
Interface Order Code	3671570
Legacy Code	UMERARP
Notes	Update to specimen requirements and reference range.
Required Testing Changes	
Specimen Required	*Patient Preparation:* Patients should be encouraged to discontinue vitamins, nutritional supplements and nonessential over-the-counter medications prior to specimen collection and avoid shellfish and seafood for 48 - 72 hours. High concentrations of iodine may interfere with elemental testing. Abstinence from iodine-containing medications or contrast agents is recommended at least 1 month before sample collection. Collection of urine specimens from patients receiving iodinated or gadolinium based contrast media should be avoided for a minimum of 72 hours post-exposure. Collection from patients with impaired kidney function should be avoided for a minimum of 14 days post-contrast media exposure. *Collect:* 24-hour urine *Specimen Preparation:* Mix well and send 8.0 mL urine in a blue-capped ARUP metal-free screw capped plastic vial. Please contact lab for metal-free screw capped plastic vials. Specimens in other containers will be rejected. **Record total volume and collection time interval on test requisition and specimen label.** *Minimum Volume:* 1.0 mL *Transport Temperature:* Refrigerated
Reference Range	**Mercury, Urine - per volume: <= 5.0 µg/L** **Mercury, Urine - per 24h: <= 20.0 µg/d** **Mercury, Urine -ratio to CRT: <= 20.0 µg/g CRT** Creatinine, Urine - per 24h: See report

Update Existing Test	
Effective Date	1/20/2026
Name	Mercury, Random Urine
Code	UMERR
Interface Order Code	3600396
Legacy Code	UMERR
Notes	Update to reference range.
Required Testing Changes	
Reference Range	**Mercury, Urine - per volume <= 5.0 µg/L** **Mercury, Urine - ratio to CRT <= 20.0 µg/gCRT**

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Update Existing Test	
Effective Date	1/20/2026
Name	Lead, Urine
Code	UPBA
Interface Order Code	3685350
Legacy Code	ULEADAR
Notes	Update to reference range.
Required Testing Changes	
Reference Range	**Lead, Urine - per volume: <= 5.0 µg/L** **Lead, Urine - per 24h: <= 8.1 µg/d** **Lead, Urine - ratio to CRT: <= 5.0 µg/g CRT** Creatinine, Urine - per 24h: See report

Update Existing Test	
Effective Date	1/20/2026
Name	Lead, Random Urine
Code	UPBR
Interface Order Code	3600391
Legacy Code	UPBR
Notes	Update to reference range.
Required Testing Changes	
Reference Range	**Lead, Urine - per volume <= 5.0 µg/L** **Lead, Urine - ratio to CRT <= 5.0 µg/gCRT**

Update Existing Test	
Effective Date	1/12/2026
Name	Phenol Exposure, Urine
Code	UPHEP
Interface Order Code	3301475
Legacy Code	UPHEP
Notes	Update to specimen requirements.
Required Testing Changes	
Specimen Required	*Patient Preparation:* Preservative-free urine recommended. Samples preserved with Benzoic acid are unsuitable for analysis. *Collect:* Random urine ***Specimen Preparation:*** **Send 2.0 mL urine in a screw-capped plastic urine container.** *Minimum Volume:* 1.9 mL *Transport Temperature:* Refrigerated

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test With Replacement			
Effective Date	1/6/2026		
Inactivated Test			
Name	Adrenal Antibody Screen with reflex to Titer		
Code	ADABR		
Legacy Code	ADABR		
Interface Order Code	3400328		
Replacement Test			
Name	21-Hydroxylase Ab, Serum		
Code	21HYD		
CPT Code(s)	83516		
Notes	New York DOH Approval Status: Yes		
Specimen Requirements			
Specimen Required	*Collect*: Serum separator tube (SST) *Specimen Preparation*: Centrifuge, separate serum from cells within 2 hours and send 1.0 mL serum in a screw capped plastic vial. *Minimum Volume*: 0.3 mL *Transport Temperature*: Refrigerated		
Alternate Specimen	Serum: Red top		
Rejection Criteria	Grossly hemolyzed or lipemic		
Stability	After separation from cells: Room temperature: 24 hours Refrigerated: 7 days Frozen: 1 month		
Performing Information			
Methodology	Qualitative Enzyme-Linked Immunosorbent Assay		
Reference Range	Negative		
Performed Days	Tuesday, Friday		
Turnaround Time	3 - 8 days		
Performing Laboratory	ARUP Reference Laboratory		
Interface Information			
Legacy Code	21HYDAB		
Interface Order Code	3687160		
Result Code	**Name**	**LOINC Code**	**AOE/Prompt**
3687160	21-Hydroxylase Ab, Serum	85363-0	No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 36 Y

Referral Testing

Collected: 06/03/2025 11:02 Received: 06/03/2025 11:02

Test Name	Result	Flag	Ref-Ranges	Units	Site
21-Hydroxylase Ab, Serum	Negative				ARRL

INTERPRETIVE INFORMATION: 21-Hydroxylase Autoantibodies, Serum
The 21-Hydroxylase Autoantibody assay is intended for the qualitative determination of autoantibodies to steroid 21-hydroxylase in human serum.
A positive result is indicative of primary adrenal insufficiency (Addison disease). Results should be interpreted within the context of clinical symptoms, including functional adrenal testing.
Males with adrenal insufficiency and negative results for 21-hydroxylase autoantibodies should be screened for X-Linked Adrenoleukodystrophy (X-ALD) by ordering Very Long-Chain Branched Fatty Acids in Plasma (ARUP Test Code 2004250).
Performed By: ARUP Laboratories
500 Chipeta Way
Salt Lake City, UT 84108
Laboratory Director: Jonathan R. Genzen, MD, PhD
CLIA Number: 46D0523979

Reported Date: 06/03/2025 11:02 21HYD

Performing Site:
ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

D803000003
WX0000000237
Printed D&T: 06/03/25 11:03

Ordered By: CLIENT CLIENT
WX00000000000336

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test With Replacement			
Effective Date	1/13/2026		
Inactivated Test			
Name	HLA-B27 Screening		
Code	B27		
Legacy Code	HLAB27		
Interface Order Code	3080980		
Replacement Test			
Name	HLA-B27 Identification by PCR		
Code	B27M		
CPT Code(s)	81374		
Notes	New York DOH Approval Status: No		
Specimen Requirements			
Specimen Required	*Collect*: Lavender EDTA *Specimen Preparation*: Draw blood in a lavender EDTA. Send 4.0 mL whole blood. *Minimum Volume*: 0.5 mL *Transport Temperature*: Refrigerated		
Alternate Specimen	Whole blood: ACD A		
Rejection Criteria	Serum, plasma, heparinized whole blood, tissue		
Stability	Room temperature: 3 days Refrigerated: 7 days Frozen: 30 days		
Performing Information			
Methodology	Polymerase Chain Reaction (PCR)		
Reference Range	See report		
Performed Days	Monday, Thursday		
Turnaround Time	3 - 5 days		
Performing Laboratory	Warde Medical Laboratory		
Interface Information			
Legacy Code	B27M		
Interface Order Code	3000462		
Result Code	**Name**	**LOINC Code**	**AOE/Prompt**
3000463	HLA-B27 Allele		No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 36 Y

Molecular

Collected: 10/14/2025 10:29 Received: 10/14/2025 10:29

Test Name	Result	Flag	Ref-Ranges	Units	Site

HLA-B27 Identification by PCR

HLA-B27 Allele	**DETECTED**	**AB**	WMRL

BACKGROUND: Presence of the HLA-B27 allele is strongly associated with ankylosing spondylitis (AS), Reiter syndrome, anterior uveitis, psoriatic arthritis, and inflammatory bowel disease.

PREVALENCE: The HLA-B27 allele can be found in 8% of Caucasians but varies regionally. The allele frequency is 25% in Northern Scandinavia, 2-8% in Southern Europe, North Africa and China, and <0.5% in Japanese.

INCIDENCE: >90% of patients with AS are HLA-B27 positive compared to 5-10% of the general population.

PENETRANCE: 2-8% of individuals with at least one copy of the HLA-B27 allele will develop AS.

METHODOLOGY: Polymerase chain reaction (PCR) and melt curve analysis (MCA).

ASSAY PERFORMANCE: >95% clinical sensitivity. >99% clinical specificity. LOD >1 ng gDNA. No cross-reactivity with any other HLA-B alleles has been observed.

LIMITATIONS: The primers are expected to miss the following HLA-B27 allele subtypes: B*27:04:03, B*27:07:01, B*27:07:02, B*27:07:03, B*27:07:04, B*27:102, B*27:11, B*27:125, B*27:14, B*27:19, B*27:20, B*27:21, B*27:24, B*27:30, B*27:32, B*27:33, B*27:34, B*27:36, B*27:43, B*27:70, B*27:81, B*27:90:01, B*27:90:02.

This test was developed and its performance characteristics determined by Warde Medical Laboratory. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Reported Date: 10/14/2025 10:29 B27M

Performing Site:
WMRL: WARDE MEDICAL LABORATORY 300 West Textile Road Ann Arbor MI 48108

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E214000002
WX0000000237
Printed D&T: 10/14/25 10:29

Ordered By: CLIENT CLIENT
WX00000000000336

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test With Replacement			
Effective Date	1/20/2026		
Inactivated Test			
Name	Chlamydia Culture		
Code	CHC		
Legacy Code	CHC		
Interface Order Code	3093000		
Replacement Test			
Name	Chlamydiae Species Culture		
Code	CSC		
CPT Code(s)	87110, 87140		
Notes	New York DOH Approval Status: Yes		
Specimen Requirements			
Specimen Required	*Collect:* Swab specimen - See specimen preparation for acceptable samples *Specimen Preparation:* Swab specimens (endocervix, endourethral, or rectal mucosa (without feces), in viral transport medium. Specimen source is required. *Minimum Volume:* 1 swab in viral transport medium *Transport Temperature:* Frozen (-70° C)		
Alternate Specimen	Vaginal swab on children <13 years		
Rejection Criteria	Specimens submitted in Viral Transport Media that do not support Chlamydia, Wooden shaft and calcium alginate swabs, Bacterial transport systems, Molecular transport systems, Respiratory specimens, Eye (conjunctival) specimens, Dry swab		
Stability	Room temperature: Unacceptable Refrigerated: 48 hours Frozen (-20° C): Unacceptable Frozen (-70° C): 30 days		
Performing Information			
Methodology	Centrifugation-Enhanced Culture with Monoclonal Antibody Detection		
Reference Range	Not isolated		
Performed Days	Monday - Saturday		
Turnaround Time	5 - 7 days		
Performing Laboratory	Quest		
Interface Information			
Legacy Code	CSC		
Interface Order Code	3401119		
Result Code	**Name**	**LOINC Code**	**AOE/Prompt**
3401117	Source:	31208-2	Yes
3401118	Result	560-3	No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 37 Y

Referral Testing

Collected: 12/16/2025 08:31 Received: 12/16/2025 08:31

Test Name	Result	Flag	Ref-Ranges	Units	Site
Chlamydiae Species Culture					
Source:	Endocervical Swab				QCRL
Result	ISOLATED				QCRL

Test Performed at:
Quest Diagnostics Nichols Institute
33608 Ortega Highway
San Juan Capistrano, CA 92675-2042 I Maramica MD, PhD

Reported Date: 12/16/2025 08:32 CSC

Performing Site:
QCRL: QUEST DIAGNOSTICS REFERENCE LAB CAPISTRANO 33608 Ortega Highway San Juan Capistrano CA 92675

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E416000002
WX0000000237
Printed D&T: 12/16/25 08:32

Ordered By: CLIENT CLIENT
WX00000000000511

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1

Inactivate Test With Replacement	
Effective Date	1/19/2026
Inactivated Test	
Name	Pneumococcal Antibody Panel (14 Serotype)
Code	PN14S
Legacy Code	PN14S
Interface Order Code	3300348
Replacement Test	
Name	Pneumococcal Antibody Panel - PCV15 (15-serotype)
Code	PN15S
CPT Code(s)	86581
Notes	New York DOH Approval Status: Yes
Specimen Requirements	
Specimen Required	*Collect:* Serum separator tube (SST) *Specimen Preparation:* Centrifuge, separate serum from cells and send 1.0 mL serum in a screw capped plastic vial. *Minimum Volume:* 0.5 mL *Transport Temperature:* Refrigerated
Alternate Specimen	Serum: Red top
Rejection Criteria	All samples other than serum
Stability	Room temperature: 6 weeks Refrigerated: 6 weeks Frozen: 24 months
Performing Information	
Methodology	Fluoroimmunoassay, Luminex® Multiplex
Reference Range	> 1.3 µg/mL
Performed Days	Monday - Friday
Turnaround Time	7 - 9 days
Performing Laboratory	Viracor Eurofins
Interface Information	
Legacy Code	PN15S
Interface Order Code	3300426

Result Code	Name	LOINC Code	AOE/Prompt
3300407	Pneumo Ab Type 1		No
3300408	Pneumo Ab Type 3		No
3300409	Pneumo Ab Type 4		No
3300411	Pneumo Ab Type 5		No
3300412	Pneumo Ab Type 6A		No
3300413	Pneumo Ab Type 6B		No
3300414	Pneumo Ab Type 7F		No
3300416	Pneumo Ab Type 9V		No
3300417	Pneumo Ab Type 14		No
3300418	Pneumo Ab Type 18C		No
3300419	Pneumo Ab Type 19A		No

3300421	Pneumo Ab Type 19F		No
3300422	Pneumo Ab Type 22F		No
3300423	Pneumo Ab Type 23F		No
3300424	Pneumo Ab Type 33F		No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000158 M 07/08/1968 57 Y

Referral Testing

Collected: 12/16/2025 08:34 Received: 12/16/2025 08:34

Test Name	Result	Flag	Ref-Ranges	Units	Site
Pneumococcal Antibody Panel - PCV15 (15-serotype)					
Pneumo Ab Type 1	>4.3		>1.3	ug/mL	VIRL
Pneumo Ab Type 3	>4.2		>1.3	ug/mL	VIRL
Pneumo Ab Type 4	>3.3		>1.3	ug/mL	VIRL
Pneumo Ab Type 5	>3.8		>1.3	ug/mL	VIRL
Pneumo Ab Type 6A	>3.9		>1.3	ug/mL	VIRL
Pneumo Ab Type 6B	>9.1		>1.3	ug/mL	VIRL
Pneumo Ab Type 7F	>8.3		>1.3	ug/mL	VIRL
Pneumo Ab Type 9V	>6.4		>1.3	ug/mL	VIRL
Pneumo Ab Type 14	>38.0		>1.3	ug/mL	VIRL
Pneumo Ab Type 18C	>7.3		>1.3	ug/mL	VIRL
Pneumo Ab Type 19A	>13.9		>1.3	ug/mL	VIRL
Pneumo Ab Type 19F	>14.6		>1.3	ug/mL	VIRL
Pneumo Ab Type 22F	>9.5		>1.3	ug/mL	VIRL
Pneumo Ab Type 23F	>6.0		>1.3	ug/mL	VIRL
Pneumo Ab Type 33F	>10.7		>1.3	ug/mL	VIRL

The Pneumococcal Antibody test is performed by a multiplex, bead-based immunofluorescence assay. This test was developed and its performance characteristics were determined by Eurofins Viracor. It has not been cleared or approved by the U.S. Food and Drug Administration.

Testing Performed At:
Eurofins Viracor, LLC
18000 W. 99th Street, Suite 10
Lenexa, KS 66219
Lab Director: Brock Neil, PhD BCLD (ABB)
CLIA # 26D-0983643
FLAG Interpretation: A = Abnormal, H = High, L = Low

Reported Date: 12/16/2025 08:40 PN15S

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E416000003
WX0000000158
Printed D&T: 12/16/25 08:40

Ordered By: CLIENT CLIENT
WX00000000000260

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test With Replacement	
Effective Date	1/12/2026
Inactivated Test	
Name	Dextromethorphan and Metabolite Ratio - Total, Urine
Code	UDEXM
Legacy Code	UDEXM
Interface Order Code	3302500
Replacement Test	
Name	Dextromethorphan/Levomethorphan & Metabolite Ratio-Total, U
Code	UDLMR
CPT Code(s)	80362 (G0480)
Notes	New York Approval Status: Yes
Specimen Requirements	
Specimen Required	*Collect:* Random urine *Specimen Preparation:* Send 1.0 mL urine refrigerated in a screw capped plastic container. *Minimum Volume:* 0.3 mL *Transport Temperature:* Refrigerated
Stability	Room temperature: 30 days Refrigerated: 30 days Frozen: 2 years
Performing Information	
Methodology	High Performance LIquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)
Reference Range	See report
Performed Days	Monday - Sunday
Turnaround Time	9 - 11 days
Performing Laboratory	NMS Labs
Interface Information	
Legacy Code	UDLMR
Interface Order Code	3300403

Result Code	Name	LOINC Code	AOE/Prompt
3300401	Dextrorphan/Levorphanol - Total	73566-2	No
3300402	Dextro/Levo Methorphan - Total	21240-7	No
3302530	Metabolic Ratio		No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 37 Y

Referral Testing

Collected: 12/16/2025 08:43 Received: 12/16/2025 08:43

Test Name	Result	Flag	Ref-Ranges	Units	Site
Dextromethorphan/Levomethorphan & Metabolite Ratio-Total, U					
Dextrorphan/Levorphanol - Total	None Detected			uMol	NMRL

Reporting Limit: 0.388 uMol
Dextrorphan is a metabolite of dextromethorphan, an over the counter antitussive.
Levorphanol is an analgesic indicated for the relief of moderate to severe pain. Its potency is approximately four to five times that of morphine.
This test does not differentiate between dextrorphan and levorphanol.
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)

Dextro/Levo Methorphan - Total	None Detected			uMol	NMRL

Reporting Limit: 0.0368 uMol
This test does not differentiate between dextromethorphan and levomethorphan.
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)

Metabolic Ratio	See Comment				NMRL

Comment:
Unable to calculate
Typically, if the metabolic ratio is greater than 0.30 patients are considered to have a deficiency in CYP2D6 expression, while a metabolic ratio less than 0.30 categorizes them as an Extensive Metabolizer (normal).
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)
This test was developed and its performance characteristics determined by NMS Labs. It has not been cleared or approved by the US Food and Drug Administration.
Digital data review may have taken place remotely by qualified NMS staff utilizing a secure VPN connection for some or all of the reported results. This is in accordance with and follows CLIA regulations.

Testing performed at NMS Labs, Inc.
200 Welsh Road
Horsham, PA 19044-2208
Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director
CLIA 39D0197898

Reported Date: 12/16/2025 08:44 UDLMR

Performing Site:
NMRL: NMS Labs 200 Welsh Road Horsham PA 19044

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E416000004
WX0000000237
Printed D&T: 12/16/25 08:44

Ordered By: CLIENT CLIENT
WX00000000000511

Kajal V. Sitwala, MD, PhD - Medical Director
Form: MM RL1

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test With Replacement	
Effective Date	1/20/2026
Inactivated Test	
Name	UGT1A1 Genotyping
Code	UGT1A
Legacy Code	UGT1A
Interface Order Code	3600407
Replacement Test	
Name	UDP Glucuronosyltransferase 1A1 (UGT1A1) Genotyping
Code	UGTG
CPT Code(s)	81350
Notes	New York DOH Approval Status: Yes
Specimen Requirements	
Specimen Required	*Collect:* Lavender EDTA *Specimen Preparation:* Send 3.0 mL whole blood. Minimum Volume: 1.0 mL *Transport Temperature:* Refrigerated
Alternate Specimen	Yellow ACD A or B; pink (K2EDTA)
Rejection Criteria	Frozen specimens
Stability	Room temperature: 7 days Refrigerated: 1 month Frozen: Unacceptable
Performing Information	
Methodology	Polymerase Chain Reaction, Fragment Analysis
Reference Range	See report
Performed Days	Varies
Turnaround Time	4 - 9 days
Performing Laboratory	ARUP Reference Laboratory
Interface Information	
Legacy Code	UGTG
Interface Order Code	3600551

Result Code	Name	LOINC Code	AOE/Prompt
3600552	UGT1A1 Genotyping Specimen	66746-9	No
3600409	UGT1A1 Genotyping Allele 1	51951-2	No
3600411	UGT1A1 Genotyping Allele 2	51952-0	No
3600412	UGT1A1 Genotyping Interpretation	34509-0	No
3600413	EER UGT1A1	11526-1	No

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 37 Y

Referral Testing

Collected: 12/12/2025 10:53 Received: 12/12/2025 10:53

Test Name	Result	Flag	Ref-Ranges	Units	Site
UDP Glucuronosyltransferase 1A1 (UGT1A1) Genotyping					
UGT1A1 Genotyping Specimen	Whole Blood				ARRL
UGT1A1 Genotyping Allele 1	**(TA)5 or *36**	**AB**			ARRL
UGT1A1 Genotyping Allele 2	(TA)6 or *1				ARRL
UGT1A1 Genotyping Interpretation	See Note				ARRL

This result has been reviewed and approved by Pinar Bayrak-Toydemir, M.D., Ph.D.
BACKGROUND INFORMATION: UDP Glucuronosyltransferase 1A1 (UGT1A1) Genotyping
CHARACTERISTICS: UGT1A1 is responsible for the clearance of drugs (e.g., irinotecan) and endobiotic compounds (e.g., bilirubin). Irinotecan's major active and toxic metabolite (SN-38) is inactivated by the UGT1A1 enzyme and then eliminated via the bile. UGT1A1 gene mutations cause accumulation of SN-38, which may lead to irinotecan-related toxicities (neutropenia, diarrhea).
CAUSE: Variations in TA repeat number in the TATAAA element of the 5'UGT1A1-promoter affects transcription efficiency. The common number of repeats is six [(TA)6, *1 allele], while seven repeats [(TA)7, *28 allele] is associated with reduced transcription activity. Homozygosity for the (TA)7 allele is also associated with Gilbert syndrome (benign familial hyperbilirubinemia).
ALLELES TESTED: *36 allele, (TA)5; *1 allele, (TA)6; *28 allele, (TA)7 and *37 allele, (TA)8.
CLINICAL SENSITIVITY/SPECIFICITY: Risk of irinotecan toxicity by genotype (Br J Cancer. 2004; 91:678-82).
6/6 (*1/*1): diarrhea 17 percent; neutropenia 15 percent
6/7 (*1/*28): diarrhea 33 percent; neutropenia 27 percent
7/7 (*28/*28): diarrhea 70 percent; neutropenia 40 percent

ALLELIC FREQUENCY:
*1(TA)6: Whites 0.61, Asians 0.84, African Americans 0.47
*28(TA)7: Whites 0.39, Asians 0.16, African Americans 0.43

METHODOLOGY: Polymerase chain reaction followed by size analysis using capillary electrophoresis.
ANALYTICAL SENSITIVITY AND SPECIFICITY: Greater than 99 percent.
LIMITATIONS: Variations in the UGT1A1 gene, other than those targeted, will not be detected. Clinical significance of the rare *36, (TA)5 and *37, (TA)8 alleles in predicting irinotecan toxicities is not well established. Genetic and non-genetic factors other than UGT1A1, may contribute to irinotecan toxicity and efficacy. Diagnostic errors can occur due to rare sequence variations.

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

Warde Medical Laboratory

LABORATORY REPORT

QC ACCOUNT (WARDE)
300 W. TEXTILE
ANN ARBOR MI 48108

EXAMPLE, REPORT
WX0000000237 F 12/05/1988 37 Y

Referral Testing

Collected: 12/12/2025 10:53 Received: 12/12/2025 10:53

Test Name	Result	Flag	Ref-Ranges	Units	Site

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

EER UGT1A1 See Note ARRL

Authorized individuals can access the ARUP Enhanced Report with an ARUP Connect account using the following link.

Your local lab can assist you in obtaining the patient report if you don't have a Connect account.

https://c11-erpt.aruplab.com/?t=06C202o26CMq06t44L2rB
Performed By: ARUP Laboratories
500 Chipeta Way
Salt Lake City, UT 84108
Laboratory Director: Jonathan R. Genzen, MD, PhD
CLIA Number: 46D0523979

Reported Date: 12/12/2025 10:53 UGTG

Performing Site:
ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

Warde Medical Laboratory

TEST DIRECTORY UPDATE

JANUARY 2026

Inactivate Test Without Replacement	
Effective Date	1/26/2026
Name	Anaplasma phagocytophilum Ab IgG IgM
Code	ANPHP
Legacy Code	ANPHP
Interface Code	3719535
Notes	Test discontinued.

Inactivate Test Without Replacement	
Effective Date	1/26/2026
Name	Anaplasma phagocytophilum Ehrlichia chaffeensis AB IgG, IgM
Code	APECV
Legacy Code	APECV
Interface Code	3719455
Notes	Test discontinued.

Inactivate Test Without Replacement	
Effective Date	1/26/2026
Name	Babesia microti Antibodies (IgG, IgM), IFA
Code	BAGMQ
Legacy Code	BAGMQ
Interface Code	3702425
Notes	Test discontinued.

Inactivate Test Without Replacement	
Effective Date	1/26/2026
Name	Ehrlichia chaffeensis Ab IgG IgM
Code	ECGMV
Legacy Code	ECGMV
Interface Code	3719585
Notes	Test discontinued.

Inactivate Test Without Replacement	
Effective Date	1/20/2026
Name	Von Willebrand Panel
Code	VWPAR
Legacy Code	VWPAR
Interface Code	3689300
Notes	Test discontinued.