
Lab Dept:	Chemistry
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Test Name:	AST
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General Information

Lab Order Codes:	AST
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Synonyms:	Aspartate Aminotransferase; SGOT; Serum Glutamic Oxaloacetic Transaminase
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CPT Codes:	84450 - Transferase; aspartate amino (AST) (SGOT)
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Test Includes:	Aspartate aminotransferase concentration reported in U/L.
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Logistics

Test Indications:	The aminotransferases constitute a group of enzymes that catalyze the interconversion of amino acids and 2-oxo-acids by transfer of amino acids. AST and ALT are the two enzymes of greatest clinical significance. Elevated AST levels are found in hepatic disease, myocardial damage, pulmonary emboli, muscle injuries, muscular dystrophy, hemolytic disease, acute pancreatitis, or gangrene.
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Lab Testing Sections:	Chemistry
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Phone Numbers:	MIN Lab: 612-813-6280
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	STP Lab: 651-220-6550
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Test Availability:	Daily, 24 hours
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Turnaround Time:	4 hours
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Special Instructions:	N/A
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Specimen

Specimen Type:	Whole blood
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Container:	Preferred: Green top (Li Heparin) tube Alternate: Red, marble or gold top tube
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Draw Volume:	0.6 mL blood
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Processed Volume:	0.2 mL plasma/serum
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Collection:	Routine blood collection
Special Processing:	Lab Staff: Centrifuge specimen, transfer serum/plasma into plastic sample cup. Analyze sample immediately or store at refrigerated temperatures for up to 7 days.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimen; gross hemolysis

Interpretive

Reference Range:

Reference ranges by Method:	
Method Vista	
Age:	Males & Females (U/L):
0 – 2 years:	10 – 74 U/L
2 – <8 years:	10 – 50 U/L
>8 years:	10 – 41 U/L
Method Abbott	
0 – 14 days:	32 – 162 U/L
15 days – 364 days:	20 – 67 U/L
1 year – 6 years:	21 – 44 U/L
7 – 11 years:	18 – 36 U/L
12 – 18 years female:	13 – 26 U/L
12 – 18 years male:	14 – 35 U/L
Adult:	5 – 34 U/L

Critical Values:	N/A
Limitations:	Hemolysis of the sample falsely increases the AST concentration.
Methodology:	VISTA: Enzymatic, 37°C ABBOTT: Enzymatic (NAOH without p5-p7)

References:

Vista AST reagent cartridge insert sheet, Siemens Healthcare Diagnostics Inc., 2013-07-16, Rev F, PN 781041.001 - US

AST Flex™ reagent cartridge insert sheet Siemens Healthcare Diagnostics Inc. 2012-07-13 Rev H, F 717041.002 - US

Dimension Vista Enzyme 2 Calibrator insert sheet, Siemens Healthcare Diagnostics Inc., PN 751321.001-US, Rev A, 01/2011

Enzyme Verifier insert sheet, Siemens Healthcare Diagnostics Inc., Newark, DE 19714, PN 792019.001-US, 01/2013, Rev I

Architect AST Pkg Insert, Abbott Laboratories Diagnostics Division, Abbott Park, IL 60064, March 2017

Alinity AST Pkg Insert, Abbott Laboratories Diagnostics Division, Abbott Park, IL 60064, February 2018

Clinical Significance, Dade Behring Inc., Glasgow Business Community, Mailbox 531, P.O. Box 6101, Newark, Delaware 19714

Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp, Inc, Hudson, OH, 5th Edition

Biorad Multiquel Assayed Chemistry Control Product Insert, Bio-Rad Laboratories, Irvine, CA 92618

Biorad Liquichek Unassayed Chemistry Control Product Insert, Bio-Rad Laboratories, Irvine, CA 92618

Pediatric Reference Ranges (2007), 6th Edition, Steven J Soldin, Carlo Brugnara, Edward C Wong, AACC Press, 7/1/2007

CLSI-based transference of the CALIPER database of pediatric reference intervals from Abbott to Beckman, Ortho, Roche and Siemens Clinical Chemistry Assays, Clinical Biochemistry 46 (2013) 1197-1219

Updates:

2/17/2005: Critical value previously listed >500 U/L.

8/17/2015: Method and ref range update

2/8/2016: Update alt tube types

10/18/2019: New backup instrumentation and related reference ranges