

# PLASMA AMINO ACIDS



The Great Plains Laboratory, Inc.

William Shaw, Ph.D. Director 11813 W. 77th Street, Lenexa, KS 66214 (913) 341-8949 Fax (913) 341-6207

LAB#: PATIENT:  
SEX: AGE:  
CLIENT#:

## SPECIMEN VALIDITY

SPECIMEN MARKERS	RESULT	REFERENCE RANGE	PERCENTILE	
			5 <sup>th</sup>	32 <sup>nd</sup>
Glutamine/Glutamate	1.2	> 8.5		
Asparagine/Aspartate	1.6	> 7.5		
Ammonia	120	< 30 $\mu$ moles/100ml	68 <sup>th</sup>	95 <sup>th</sup>
SPECIMEN VALIDITY INDEX				

## ESSENTIAL / CONDITIONALLY INDISPENSABLE AMINO ACIDS

ESSENTIAL AMINO ACIDS	RESULT $\mu$ moles/100ml	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Methionine	1.9	1.4- 3.2					
Taurine	25	4.5- 16					
Lysine	15	12- 24					
Threonine	9.4	6- 17					
Tryptophan	2.3	2.5- 6					
Phenylalanine	4.8	3- 8					
Leucine	10	6- 15					
Isoleucine	4.1	3.7- 9					
Valine	15	13- 29					
Arginine	1.3	4- 12					
Histidine	7.1	6- 10					

## NONESSENTIAL AMINO ACIDS

NONESSENTIAL AMINO ACIDS	RESULT $\mu$ moles/100ml	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Alanine	36	20- 54					
Aspartate	3.3	0.15- 1.6					
Asparagine	5.2	3.5- 7.5					
Glutamine	31	40- 69					
Glutamate	25	2- 15					
Cystine	2	1.5- 4.5					
Glycine	35	14- 40					
Tyrosine	5.6	3.5- 9					
Serine	12	6- 16					
Proline	15	9- 25					

LAB#:  
 PATIENT:  
 SEX:  
 AGE:  
 CLIENT#:

**GASTROINTESTINAL MARKERS**

GI MARKERS	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Ethanolamine	1.4	0.2- 1.3	[Bar chart showing result at 50th percentile]				
Threonine	9.4	6- 17	[Bar chart showing result at 50th percentile]				
Tryptophan	2.3	2.5- 6	[Bar chart showing result at 50th percentile]				
			68 <sup>th</sup>		95 <sup>th</sup>		
Alpha-Amino adipate	0.14	< 0.3	[Bar chart showing result at 50th percentile]				
Beta-alanine	0.82	< 1	[Bar chart showing result at 50th percentile]				
Beta-aminoisobutyrate	0.17	< 0.5	[Bar chart showing result at 50th percentile]				
Anserine	< dl	< 0.1	[Bar chart showing result at 50th percentile]				
Carnosine	< dl	< 0.1	[Bar chart showing result at 50th percentile]				
Gamma-aminobutyrate	< dl	< 0.1	[Bar chart showing result at 50th percentile]				
Hydroxyproline	2.1	< 3.5	[Bar chart showing result at 50th percentile]				

**MAGNESIUM DEPENDANT MARKERS**

MAGNESIUM MARKERS	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Citrulline	3.4	1.6- 3.9	[Bar chart showing result at 50th percentile]				
Ethanolamine	1.4	0.2- 1.3	[Bar chart showing result at 50th percentile]				
Phosphoethanolamine	1.6	0.08- 1	[Bar chart showing result at 50th percentile]				
Phosphoserine	0.041	0.013- 0.025	[Bar chart showing result at 50th percentile]				
Serine	12	6- 16	[Bar chart showing result at 50th percentile]				
Taurine	25	4.5- 16	[Bar chart showing result at 50th percentile]				
			68 <sup>th</sup>		95 <sup>th</sup>		
Methionine Sulfoxide	0.63	< 1	[Bar chart showing result at 50th percentile]				

**B6, B12, & FOLATE DEPENDANT MARKERS**

B-VITAMIN MARKERS	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup>	97.5 <sup>th</sup>
Cystine	2	1.5- 4.5	[Bar chart showing result at 50th percentile]				
Alpha amino-N-butyrate	1.9	0.8- 3.3	[Bar chart showing result at 50th percentile]				
Histidine	7.1	6- 10	[Bar chart showing result at 50th percentile]				
Serine	12	6- 16	[Bar chart showing result at 50th percentile]				
			68 <sup>th</sup>		95 <sup>th</sup>		
Cystathionine	< dl	< 0.1	[Bar chart showing result at 50th percentile]				
Alpha-amino adipate	0.14	< 0.3	[Bar chart showing result at 50th percentile]				
Beta-aminoisobutyrate	0.17	< 0.5	[Bar chart showing result at 50th percentile]				
Beta-alanine	0.82	< 1	[Bar chart showing result at 50th percentile]				
Homocystine	0.005	< 0.05	[Bar chart showing result at 50th percentile]				
Sarcosine	0.47	< 0.8	[Bar chart showing result at 50th percentile]				
1-Methylhistidine	0.28	< 1.5	[Bar chart showing result at 50th percentile]				
3-Methylhistidine	0.37	< 3.5	[Bar chart showing result at 50th percentile]				



LAB#: PATIENT: SEX: AGE: CLIENT#:

DETOXIFICATION MARKERS						
DETOX MARKERS	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE			
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup> 97.5 <sup>th</sup>
Methionine	1.9	1.4- 3.2				
Cystine	2	1.5- 4.5				
Taurine	25	4.5- 16				
Glutamine	31	40- 69				
Glycine	35	14- 40				
Aspartate	3.3	0.15- 1.6				

NEUROLOGICAL MARKERS						
NEUROLOGICAL MARKERS	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE			
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup> 97.5 <sup>th</sup>
Glutamine	31	40- 69				
Phenylalanine	4.8	3- 8				
Tyrosine	5.6	3.5- 9				
Tryptophan	2.3	2.5- 6				
Taurine	25	4.5- 16				
Cystine	2	1.5- 4.5				
Beta-alanine	0.82	< 1				
Cystathionine	< dl	< 0.1				

UREA CYCLE METABOLITES						
UREA CYCLE METABOLITES	RESULT μmoles/100ml	REFERENCE RANGE	PERCENTILE			
			2.5 <sup>th</sup>	16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup> 97.5 <sup>th</sup>
Arginine	1.3	4- 12				
Aspartate	3.3	0.15- 1.6				
Citrulline	3.4	1.6- 3.9				
Ornithine	11	3- 10				
Urea	180	200- 620				
Glutamine	31	40- 69				
Asparagine	5.2	3.5- 7.5				

**SPECIMEN DATA**

Comments: Date Collected: Date Received: Date Completed: Methodology: HPLC  
 Reference ranges are representative of a healthy population under fasting (6-8 hrs) conditions.

V07.02