

# 24-HOUR URINE AMINO ACIDS



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

## SPECIMEN VALIDITY

SPECIMEN MARKERS	RESULT PER 24 HOURS	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>	
Creatinine	350	200- 1200 mg						
24 Hour Volume	700	450- 1500 mL						
Glutamine/Glutamate	8.9	5- 160						
Ammonia Level	7590	7000- 36000 µM						

<b>SPECIMEN VALIDITY INDEX</b>			
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## ESSENTIAL / CONDITIONALLY INDISPENSABLE AMINO ACIDS

ESSENTIAL AMINO ACIDS	RESULT µMOLE/24 HRS	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	3.8	7- 30						
Lysine	33	24- 300						
Threonine	29	50- 260						
Leucine	12	14- 80						
Isoleucine	4.2	7- 40						
Valine	13	10- 53						
Phenylalanine	20	17- 85						
Tryptophan	21	12- 110						
Taurine	260	200- 1000						
Cysteine	8.5	15- 54						
Arginine	10	5- 35						
Histidine	280	300- 1500						

## NONESENTIAL AMINO ACIDS

NONESENTIAL AMINO ACIDS	RESULT µMOLE/24 HRS	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	130	80- 420						
Aspartate	2.7	4- 25						
Asparagine	72	30- 175						
Glutamine	160	130- 580						
Glutamate	18	3- 47						
Cystine	8.7	11- 45						
Glycine	430	340- 2100						
Tyrosine	34	23- 150						
Serine	110	120- 470						
Proline	4.2	1- 55						

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**GASTROINTESTINAL MARKERS**

GI MARKERS	RESULT <small>μMOLE/24 HRS</small>	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>
Ammonia	<b>7590</b>	7000- 36000					
Ethanolamine	<b>110</b>	70- 410					
Alpha-Aminoadipate	<b>8</b>	3- 55					
Threonine	<b>29</b>	50- 260					
Tryptophan	<b>21</b>	12- 110					
Taurine	<b>260</b>	200- 1000					
			68 <sup>th</sup>		95 <sup>th</sup>		
Beta-alanine	<b>2.8</b>	< 10					
Beta-aminoisobutyrate	<b>13</b>	< 200					
Anserine	<b>4.1</b>	< 120					
Carnosine	<b>29</b>	< 100					
Gamma-aminobutyrate	<b>1</b>	< 25					
Hydroxyproline	<b>2.8</b>	< 28					

**MAGNESIUM DEPENDANT MARKERS**

MAGNESIUM MARKERS	RESULT <small>μMOLE/24 HRS</small>	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	<b>0.85</b>	1- 30					
Ethanolamine	<b>110</b>	70- 410					
Phosphoethanolamine	<b>19</b>	20- 90					
Phosphoserine	<b>0.15</b>	0.05- 0.6					
Serine	<b>110</b>	120- 470					
Taurine	<b>260</b>	200- 1000					
			68 <sup>th</sup>		95 <sup>th</sup>		
Methionine Sulfoxide	<b>1.1</b>	< 10					

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

B-VITAMIN MARKERS	RESULT <small>μMOLE/24 HRS</small>	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>
Serine	<b>110</b>	120- 470					
Alpha-aminoadipate	<b>8</b>	3- 55					
Cysteine	<b>8.5</b>	15- 54					
Cystathionine	<b>1.2</b>	4- 30					
1-Methylhistidine	<b>86</b>	30- 260					
3-Methylhistidine	<b>180</b>	25- 500					
Alpha-amino.N.butyrate	<b>2.7</b>	3- 55					
			68 <sup>th</sup>		95 <sup>th</sup>		
Beta-aminoisobutyrate	<b>13</b>	< 200					
Beta-alanine	<b>2.8</b>	< 10					
Homocystine	<b>&lt; dl</b>	< 3					
Sarcosine	<b>0.67</b>	< 25					

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DETOXIFICATION MARKERS						
DETOX MARKERS	RESULT μMOLE/24 HRS	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	3.8	7- 30				
Cysteine	8.5	15- 54				
Taurine	260	200- 1000				
Glutamine	160	130- 580				
Glycine	430	340- 2100				
Aspartate	2.7	4- 25				

NEUROLOGICAL MARKERS						
NEUROLOGICAL MARKERS	RESULT μMOLE/24 HRS	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>
Ammonia	7590	7000- 36000				
Glutamine	160	130- 580				
Phenylalanine	20	17- 85				
Tyrosine	34	23- 150				
Tryptophan	21	12- 110				
Taurine	260	200- 1000				
Cystathionine	1.2	4- 30				
			68 <sup>th</sup>		95 <sup>th</sup>	
Beta-alanine	2.8	< 10				

UREA CYCLE METABOLITES						
UREA CYCLE METABOLITES	RESULT μMOLE/24 HRS	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	10	5- 35				
Aspartate	2.7	4- 25				
Citrulline	0.85	1- 30				
Ornithine	5.2	1.5- 20				
Urea	60	80- 475				
Ammonia	7590	7000- 36000				
Glutamine	160	130- 580				
Asparagine	72	30- 175				

**SPECIMEN DATA**

Comments:	Date Received:	Date Completed:
Date Collected:	Collection Period:	Volume:
Methodology:		