

## Amino Acids, Quantitative, Plasma

**Test ID:** AAQP

**Explanation:** On the effective date, the Collection Container, Reference Values and Result Codes will be updated.

### Current Specimen Required

**Patient Preparation:** Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition: TPN if possible).

**Collection Container/Tube:**

**Preferred:** Green top (sodium heparin)

**Acceptable:** Lavender top (EDTA), plasma gel tube, or green top (lithium heparin)

**Submission Container/Tube:** Plastic vial

**Specimen Volume:** 0.5 mL

**Collection Instructions:**

1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection.
2. Centrifuge immediately or within 4 hours of collection if specimen is kept at refrigerated temperature.
3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

### New Specimen Required

**Patient Preparation:** Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition: TPN if possible).

**Collection Container/Tube:**

**Preferred:** Green top (sodium heparin)

**Submission Container/Tube:** Plastic vial

**Specimen Volume:** 0.5 mL

**Collection Instructions:**

1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection.
2. Centrifuge immediately or within 4 hours of collection if specimen is kept at refrigerated temperature.
3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

## Current Reference Values

	Age groups		
	<24 months	2-17 years	> or =18 years
Phosphoserine (PSer)	<109	<95	<18
Phosphoethanolamine (PEtN)	<6	<5	<12
Taurine (Tau)	37-177	38-153	42-156
Asparagine (Asn)	25-91	29-87	37-92
Serine (Ser)	69-271	71-208	63-187
Hydroxyproline (Hyp)	8-61	7-35	4-29
Glycine (Gly)	111-426	149-417	126-490
Glutamine (Gln)	316-1,020	329-976	371-957
Aspartic Acid (Asp)	2-20	<11	<7
Ethanolamine (EtN)	<70	<64	<67
Histidine (His)	10-116	12-132	39-123
Threonine (Thr)	47-237	58-195	85-231
Citrulline (Cit)	9-38	11-45	17-46
Sarcosine (Sar)	<5	<5	<5
b-Alanine (bAla)	<28	<27	<29
Alanine (Ala)	139-474	144-557	200-579
Glutamic Acid (Glu)	31-202	22-131	13-113
1-Methylhistidine (1MHis)	<11	<20	<28
3-Methylhistidine (3MHis)	<1	<1	2-9
Argininosuccinic Acid (Asa)	<2	<2	<2
Carnosine (Car)	<13	<1	<1
Anserine (Ans)	<1	<1	<1
Homocitrulline (Hcit)	<5	<2	<2
Arginine (Arg)	29-134	31-132	32-120
a-Aminoadipic Acid (Aad)	<4	<3	<3
g-Amino-n-butyric Acid (GABA)	<4	<3	<2
b-Aminoisobutyric Acid (bAib)	<9	<5	<5
a-Amino-n-butyric Acid (Abu)	7-28	7-31	9-37
Hydroxylysine (Hyl)	<4	<3	<2
Proline (Pro)	85-303	80-357	97-368
Ornithine (Orn)	20-130	22-97	38-130
Cystathionine (Cth)	<2	<2	<5
Cystine (Cys)	2-32	2-36	3-95
Lysine (Lys)	49-204	59-240	103-255
Methionine (Met)	11-35	11-37	4-44
Valine (Val)	83-300	106-320	136-309
Tyrosine (Tyr)	26-115	31-106	31-90
Isoleucine (Ile)	31-105	30-111	36-107
Leucine (Leu)	48-175	51-196	68-183
Phenylalanine (Phe)	28-80	30-95	35-80
Tryptophan (Trp)	17-75	23-80	29-77
Alloisoleucine (AlloIle)	<2	<3	<5

## New Reference Values

Amino acids	Age groups		
	<24 months	2-17 years	> or =18 years
Taurine (Tau)	31-354	32-181	21-123
Asparagine (Asn)	18-94	25-80	23-94
Serine (Ser)	59-224	53-166	55-146
Hydroxyproline (Hyp)	< 121	< 73	< 38
Glycine (Gly)	80-500	80-500	80-500
Glutamine (Gln)	356-857	353-790	447-774
Aspartic Acid (Asp)	< 48	< 17	< 13
Ethanolamine (EtN)	< 70	< 30	< 20
Histidine (His)	46-147	56-119	61-120
Threonine (Thr)	49-358	48-205	73-325
Citrulline (Cit)	8-42	12-44	18-57
Sarcosine (Sar)	< 20	< 20	< 20
b-Alanine (bAla)	< 36	< 36	< 36
Alanine (Ala)	139-474	144-557	200-579
Glutamic Acid (Glu)	28-376	16-182	13-148
1-Methylhistidine (1MHis)	< 12	< 12	< 12
3-Methylhistidine (3MHis)	< 11	< 30	< 35
Argininosuccinic Acid (Asa)	< 5	< 5	< 5
Homocitrulline (Hcit)	< 5	< 2	< 2
Arginine (Arg)	28-164	28-156	45-144
a-Aminoadipic Acid (Aad)	< 4	< 4	< 4
g-Amino-n-butyric Acid (GABA)	< 4	< 4	< 4
b-Aminoisobutyric Acid (bAib)	< 9	< 5	< 5
a-Amino-n-butyric Acid (Abu)	< 40	< 40	< 40
Hydroxylysine (Hyl)	< 4	< 4	< 4
Proline (Pro)	102-342	99-389	107-383
Ornithine (Orn)	32-171	32-148	39-154
Cystathionine (Cth)	< 4	< 4	< 4
Cystine (Cys)	6-131	3-151	8-310
Lysine (Lys)	83-304	61-291	105-335
Methionine (Met)	12-57	13-41	13-40
Valine (Val)	94-382	111-367	134-357
Tyrosine (Tyr)	27-188	36-133	36-113
Isoleucine (Ile)	23-149	26-150	29-153
Leucine (Leu)	59-213	51-216	79-217
Phenylalanine (Phe)	36-105	38-116	45-106
Tryptophan (Trp)	12-103	21-114	21-108
Alloisoleucine (Allolle)	< 5	< 5	< 5

Current Result Codes

New Result Codes

Result ID	Reporting Name
34449	Phosphoserine
34457	Phosphoethanolamine
3512	Taurine
3517	Asparagine
3516	Serine
34458	Hydroxyproline
3522	Glycine
3518	Glutamine
34459	Aspartic Acid
34460	Ethanolamine
3535	Histidine
3515	Threonine
3521	Citrulline
34461	Sarcosine
3532	Beta-Alanine
3523	Alanine
3520	Glutamic Acid
34453	1-Methylhistidine
34454	3-Methylhistidine
32341	Argininosuccinic Acid
34455	Carnosine
34462	Anserine
34456	Homocitrulline
3536	Arginine
34450	Alpha-aminoadipic Acid
34463	Gamma-amino-n-butyric Acid
34452	Beta-aminoisobutyric Acid
3524	Alpha-amino-n-butyric Acid
34464	Hydroxylysine
3519	Proline
3533	Ornithine

Result ID	Reporting Name
3570	Interpretation (AAQP)
3512	Taurine
3517	Asparagine
3516	Serine
34458	Hydroxyproline
3522	Glycine
3518	Glutamine
34459	Aspartic Acid
34460	Ethanolamine
3535	Histidine
3515	Threonine
3521	Citrulline
34461	Sarcosine
3532	Beta-Alanine
3523	Alanine
3520	Glutamic Acid
34453	1-Methylhistidine
34454	3-Methylhistidine
32341	Argininosuccinic Acid
34456	Homocitrulline
3536	Arginine
34450	Alpha-aminoadipic Acid
34463	Gamma-amino-n-butyric Acid
34452	Beta-aminoisobutyric Acid
3524	Alpha-amino-n-butyric Acid
34464	Hydroxylysine
3519	Proline
3533	Ornithine

34451	Cystathionine
3526	Cystine
3534	Lysine
3527	Methionine
3525	Valine
3530	Tyrosine
3528	Isoleucine
3529	Leucine
3531	Phenylalanine
34465	Tryptophan
32347	Allo-isoleucine
3570	Interpretation (AAQP)

34451	Cystathionine
3526	Cystine
3534	Lysine
3527	Methionine
3525	Valine
3530	Tyrosine
3528	Isoleucine
3529	Leucine
3531	Phenylalanine
34465	Tryptophan
32347	Allo-isoleucine

## Questions

Contact Melissa Tricker-Klar, Laboratory Resource Coordinator at 800-533-1710.