

Reporting Title: Amino Acids, QN, P
Performing Location: Mayo Clinic Laboratories - Rochester Main Campus

Ordering Guidance:
Body fluids are not acceptable specimens for this test.
For testing urine specimens, order AAPD / Amino Acids, Quantitative, Random, Urine.
For testing spinal fluid specimens, order AACSF / Amino Acids, Quantitative, Spinal Fluid.

Additional Testing Requirements:
Not all patients with homocystinuria/homocystinemia will be detected by this assay. For quantitation of total homocysteine, order CMMPP / Cobalamin, Methionine, and Methylmalonic Acid Pathways, Plasma or HCYSP / Homocysteine, Total, Plasma in conjunction with this amino acids profile.

Necessary Information:
1. Patient's age is required.
2. Include family history, clinical condition (asymptomatic or acute episode), diet, and drug therapy information.

Specimen Requirements:
Patient Preparation: Patient should fast a minimum of 4 hours; infants should have specimen collected before next feeding (2-3 hours without total parenteral nutrition if possible).
Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube: 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 the 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.

Forms:
[If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request](#) (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
3512	Taurine	Numeric	nmol/mL	20657-3
3517	Asparagine	Numeric	nmol/mL	20638-3
3516	Serine	Numeric	nmol/mL	20656-5
3522	Glycine	Numeric	nmol/mL	20644-1
3518	Glutamine	Numeric	nmol/mL	20643-3
3535	Histidine	Numeric	nmol/mL	20645-8
3515	Threonine	Numeric	nmol/mL	20658-1

3521	Citrulline	Numeric	nmol/mL	20640-9
3532	Beta-Alanine	Numeric	nmol/mL	26604-9
3523	Alanine	Numeric	nmol/mL	20636-7
3520	Glutamic Acid	Numeric	nmol/mL	20642-5
32341	Argininosuccinic Acid	Numeric	nmol/mL	32227-1
3536	Arginine	Numeric	nmol/mL	20637-5
3524	Alpha-amino-n-butyric Acid	Numeric	nmol/mL	20634-2
3519	Proline	Numeric	nmol/mL	20655-7
3533	Ornithine	Numeric	nmol/mL	20652-4
3526	Cystine	Numeric	nmol/mL	22672-0
3534	Lysine	Numeric	nmol/mL	20650-8
3527	Methionine	Numeric	nmol/mL	20651-6
3525	Valine	Numeric	nmol/mL	20661-5
3530	Tyrosine	Numeric	nmol/mL	20660-7
3528	Isoleucine	Numeric	nmol/mL	20648-2
3529	Leucine	Numeric	nmol/mL	20649-0
3531	Phenylalanine	Numeric	nmol/mL	14875-9
3570	Interpretation (AAQP)	Alphanumeric		49247-0
32347	Allo-isoleucine	Numeric	nmol/mL	22670-4
34450	Alpha-aminoadipic Acid	Numeric	nmol/mL	26600-7
34451	Cystathionine	Numeric	nmol/mL	26607-2
34452	Beta-aminoisobutyric Acid	Numeric	nmol/mL	26605-6
34453	1-Methylhistidine	Numeric	nmol/mL	20633-4
34454	3-Methylhistidine	Numeric	nmol/mL	20635-9
34456	Homocitrulline	Numeric	nmol/mL	55876-7
34458	Hydroxyproline	Numeric	nmol/mL	20647-4
34459	Aspartic Acid	Numeric	nmol/mL	20639-1
34460	Ethanolamine	Numeric	nmol/mL	26608-0
34461	Sarcosine	Numeric	nmol/mL	26613-0
34463	Gamma-amino-n-butyric Acid	Numeric	nmol/mL	26609-8
34464	Hydroxylysine	Numeric	nmol/mL	26610-6
34465	Tryptophan	Numeric	nmol/mL	20659-9

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82139

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
Homocitruline (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 (Allole)	<5	<5	<5

All results reported in nmol/mL