

Client: Example Client ABC123  
123 Test Drive  
Salt Lake City, UT 84108  
UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** 4/20/2005  
**Gender:** Female  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 00/00/0000 00:00

**Amino Acids Quantitative by LC-MS/MS, CSF**

ARUP test code 0080137

Amino Acids, CSF Interpretation

See Note

Elevated CSF glutamine and several other amino acids. would evaluate plasma amino acids and plasma ammonia.

INTERPRETIVE INFORMATION: Amino Acids Quantitative, CSF

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CSF

Alpha-amino butyric acid, CSF	<b>9.0</b> umol/L	<b>H</b>	(Ref Interval: <=8.0)
Alanine, CSF	32.6		(Ref Interval: 16.0-46.0)
Allo-isoleucine, CSF	<2.0		(Ref Interval: <=2.0)
Alpha-aminoadipic acid, CSF	<2.0		(Ref Interval: <=2.0)
Anserine, CSF	<5.0		(Ref Interval: <=7.0)
Arginine, CSF	17.8		(Ref Interval: 8.0-31.0)
Argininosuccinic Acid, CSF	<2.0		(Ref Interval: <=2.0)
Asparagine, CSF	<b>14.3</b> umol/L	<b>H</b>	(Ref Interval: 4.0-13.0)
Aspartic Acid, CSF	<5.0		(Ref Interval: <=5.0)

**H=High, L=Low, \*=Abnormal, C=Critical**

Beta-amino isobutyric acid, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Beta-alanine, CSF	<25.0 umol/L	(Ref Interval: <=25.0)
Citrulline, CSF	1.6 umol/L	(Ref Interval: <=5.0)
Cystathionine, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Cystine, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Ethanolamine, CSF	10.8 umol/L	(Ref Interval: <=40.0)
Gamma-amino butyric acid, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Glutamic Acid, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Glutamine, CSF	<b>1175.8 umol/L H</b>	<b>(Ref Interval: 330.0-630.0)</b>
Glycine, CSF	5.4 umol/L	(Ref Interval: 5.0-20.0)
Histidine, CSF	<b>30.5 umol/L H</b>	<b>(Ref Interval: 7.0-24.0)</b>
Homocitrulline, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Homocystine, CSF	<2.0 umol/L	(Ref Interval: <=2.0)
Hydroxylysine, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Hydroxyproline, CSF	<2.0 umol/L	(Ref Interval: <=4.0)
Isoleucine, CSF	<5.0 umol/L	(Ref Interval: <=12.0)

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Unless otherwise indicated, testing performed at:

Leucine, CSF	18.7 umol/L	(Ref Interval: 5.0-22.0)
Lysine, CSF	25.8 umol/L	(Ref Interval: 10.0-36.0)
Methionine, CSF	6.7 umol/L	(Ref Interval: 2.0-7.0)
Ornithine, CSF	<5.0 umol/L	(Ref Interval: <=10.0)
Phenylalanine, CSF	<b>22.6 umol/L H</b>	<b>(Ref Interval: 6.0-20.0)</b>
Proline, CSF	<2.0 umol/L	(Ref Interval: <=5.0)
Sarcosine, CSF	<5.0 umol/L	(Ref Interval: <=5.0)
Serine, CSF	53.7 umol/L	(Ref Interval: 18.0-66.0)
Taurine, CSF	<5.0 umol/L	(Ref Interval: <=13.0)
Threonine, CSF	40.2 umol/L	(Ref Interval: 14.0-59.0)
Tryptophan, CSF	4.5 umol/L	(Ref Interval: <=5.0)
Tyrosine, CSF	16.0 umol/L	(Ref Interval: 5.0-23.0)
Valine, CSF	21.6 umol/L	(Ref Interval: 8.0-30.0)

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ARUP LABORATORIES | 800-522-2787 | aruplab.com  
500 Chipeta Way, Salt Lake City, UT 84108-1221  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 21-013-124420  
Patient Identifiers: 01234567890ABCD, 012345  
Visit Number (FIN): 01234567890ABCD  
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VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Amino Acids, CSF Interpretation	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Alpha-amino butyric acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Alanine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Allo-isoleucine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Alpha-aminoadipic acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Anserine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Arginine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Argininosuccinic Acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Asparagine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Aspartic Acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Beta-amino isobutyric acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Beta-alanine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Citrulline, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Cystathionine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Cystine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Ethanolamine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Gamma-amino butyric acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Glutamic Acid, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Glutamine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Glycine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Histidine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Homocitrulline, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Homocystine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Hydroxylysine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Hydroxyproline, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Isoleucine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Leucine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Lysine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Methionine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Ornithine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Phenylalanine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Proline, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Sarcosine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Serine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Taurine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Threonine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Tryptophan, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Tyrosine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Valine, CSF	21-013-124420	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

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END OF CHART

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