## Amino Acids, CSF Components and Reference Ranges

Taurine, CSF	nmol/mL	
Unspecified	4.0-14.0	
	T.0 IT.0	
Aspartic Acid, CSF		
nmol/mL		
0 up to 1 year	3.0-11.0	
1 year up to 19 years	2.0-5.0	
19 years and up	1.0-5.0	
Threonine, CSF		
	nmol/mL	
0 up to 1 year 1 year and up	15.0-130.0 14.0-50.0	
i year and up	14.0-50.0	
Serine, CSF		
	nmol/mL	
0 up to 1 year	29.0-86.0	
1 year and up	21.0-44.0	
Glutamic Acid, CSF		
•	nmol/mL	
Unspecified	1.0-11.0	
Glutamine, CSF		
	nmol/mL	
0 up to 1 year	390.0-824.0	
1 year and up	352.0-680.0	
Obveine 005		
Glycine, CSF		
0 up to 19 veore	nmol/mL 3.0-15.0	
0 up to 19 years 19 years and up	1.0-15.0	
ið years ann up	1.0-13.0	
Alanine, CSF		
	nmol/mL	
Unspecified	13.0-48.0	
Citrulline, CSF		
	nmol/mL	
0 up to 1 year	1.0-8.0	
1 year and up	1.0-6.0	
Alpha Aminobutyric Acid, C		
Unepocified	nmol/mL 2.0-7.0	
Unspecified	2.0-1.0	
Valine, CSF		
	nmol/mL	
0 up to 1 year	12.0-29.0	
1 year up to 19 years	9.0-18.0	
19 years and up	5.0-38.0	
Methionine, CSF		
	nmol/mL	
0 up to 1 year	1.0-8.0	
1 year up to 19 years	1.0-5.0	
19 years and up	1.0-9.0	
Isoleucine, CSF		
	nmol/mL	
<b>•</b> • •	5.0-12.0	
0 up to 1 year		
1 year up to 19 years	2.0-7.0	
	3.0-14.0	
1 year up to 19 years 19 years and up		
1 year up to 19 years 19 years and up	3.0-14.0	
1 year up to 19 years 19 years and up Leucine, CSF	3.0-14.0 nmol/mL	
1 year up to 19 years 19 years and up	3.0-14.0	

Tyrosine, CSF		
nmol/mL		
0 up to 1 year	7.0-25.0	
1 year and up	8.0-14.0	
Phenylalanine, CSF		
nmol/mL		
0 up to 1 year	5.0-23.0	
1 year up to 19 years	4.0-14.0	
19 years and up	2.0-19.0	
Ornithine, CSF		
	nmol/mL	
0 up to 1 year	3.0-19.0	
1 year and up	2.0-9.0	
Lysine, CSF		
	nmol/mL	
0 up to 1 year	12.0-36.0	
1 year up to 19 years	10.0-28.0	
19 years and up	15.0-43.0	
Histiding CSE		
Histidine, CSF	nmol/mL	
0 up to 1 year	10.0-30.0	
1 year and up	9.0-22.0	
i year and up	9.0-22.0	
Tryptophan, CSF		
nmol/mL		
0 up to 1 year	2.0-8.0	
1 year and up	2.0-4.0	
Homocarnosine, CSF		
· ·	nmol/mL	
0 up to 1 year	0.0-12.0	
1 year and up	0.0-11.0	
Arginine, CSF		
	nmol/mL	
0 up to 1 year	12.0-32.0	
1 year and up	13.0-35.0	
Amino Acid Result, CSF		
Unspecified	Normal	