

Blood Amino Acid Reference Range

	Prematur	Newbor	1-3 m	2-6m	9m-2y	3m-6y	19m-10 y	3-10y	16-18y	6-18y	Adult
ASP	0-30	<16	0-8		<9		<20		<14		<24
GLU	0-135	20-107			6m-3y 19-100			23-250		7-65	14-192
ASN			6-33			72-144				32-62	30-69
SER	94-243		76-152		33-128			79-112		71-181	65-193
HIS	10-90	49-114	43-83	96-137	24-112			24-85		64-106	32-107
GLN						475-746				360-740	369-711
ARG	10-90	22-88	22-74	56-142	11-65			23-86		44-130	21-138
GLY	0-1010	224-514	106-222	175-296	56-308			117-223		158-302	120-554
THR	95-335	114-335	64-224	191-364				42-95		74-202	79-193
ALA	274-476	236-410	134-416	177-413	99-313			137-305		193-545	210-661
TYR	0-320	42-99	30-134	72-216	11-122			31-71		43-88	22-87
TRP	0-60	<67							1-16 y 24-79	16-18 y 20-95	25-191
MET	25-45	9-41	3-39	16-49	3-29			11-16		16-37	6-40
VAL	30-230	80-246	96-292		57-262			128-283		156-288	141-317
PHE	121-454	73-205	>272 *				907-1815**				48-109
ILE	20-60	27-53	45-73	38-123	26-94			28-84		38-95	37-98
LEU	20-120	47-109	44-164		45-155			56-178		79-174	75-175
LYS	70-310	114-269	37-169		45-144			71-151		108-233	83-238

*Phenylketonuric 2-3 days

**Phenylketonuric untreated

Reference : Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 2006

Urine Amino acid Reference Range

Age-related reference intervals for urinary amino acid excretion in mmol/mol Creatinine						
Amino acid	0-1 Month	1-12 Month	1-3 years	3-8 years	8-16 years	>16 years
ASP	9-57	10-69	10-73	9-59	4-60	4-29
GLU	31-96	24-102	22-89	18-53	12-44	9-47
ASN	15-223	18-197	19-79	13-73	10-89	11-56
SER	48-509	34-329	46-143	40-94	28-94	15-85
HIS	23-676	69-392	57-262	61-259	43-211	21-164
GLN	37-600	63-446	57-205	45-165	33-125	20-92
ARG	0-81	0-40	0-15	0-11	0-9	0-5
CIT	1-18	2-46	2-29	1-23	1-17	1-15
GLY	127-2042	133-894	103-404	100-280	83-254	37-371
THR	9-337	12-145	7-73	10-67	10-48	4-48
ALA	34-358	27-313	12-185	15-97	12-97	10-57
TYR	5-74	12-64	8-38	8-32	5-30	4-21
TRP	1-46	3-37	2-29	2-27	2-27	2-12
MET	2-24	2-18	2-12	2-8	1-10	1-7
VAL	3-34	3-43	2-23	2-12	1-16	2-7
PHE	2-49	7-42	4-33	5-25	2-26	2-13
ILE	2-37	2-21	1-12	1-7	1-8	1-7
LEU	4-84	4-72	3-45	3-22	3-17	3-10
ORN	2-37	2-19	1-15	1-8	1-5	1-4
LYS	6-464	4-80	4-37	5-51	1-64	2-63