

Urine Amino acid

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
Aspartic acid (ASP)	9-57	10-69	10-73	9-59	4-60	4-29
Glutamic acid (GLU)	31-96	24-102	22-89	18-53	12-44	9-47
Asparagine (ASN)	15-223	18-197	19-79	13-73	10-89	11-56
Serine (SER)	48-509	34-329	46-143	40-94	28-94	15-85
Histidine (HIS)	23-676	69-392	57-262	61-259	43-211	21-164
Glutamine (GLN)	37-600	63-446	57-205	45-165	33-125	20-92
Arginine (ARG)	0-81	0-40	0-15	0-11	0-9	0-5
Citruline (CIT)	1-18	2-46	2-29	1-23	1-17	1-15
Glycine (GLY)	127-2042	133-894	103-404	100-280	83-254	37-371
Threonine (THR)	9-337	12-145	7-73	10-67	10-48	4-48
Alanine (ALA)	34-358	27-313	12-185	15-97	12-97	10-57
Tyrosine (TYR)	5-74	12-64	8-38	8-32	5-30	4-21
Tryptophane (TRP)	1-46	3-37	2-29	2-27	2-27	2-12
Methionine (MET)	2-24	2-18	2-12	2-8	1-10	1-7
Valine (VAL)	3-34	3-43	2-23	2-12	1-16	2-7
Phenylalanine (PHE)	2-49	7-42	4-33	5-25	2-26	2-13
Isoleucine (ILE)	2-37	2-21	1-12	1-7	1-8	1-7
Leucine (LEU)	4-84	4-72	3-45	3-22	3-17	3-10
Ornithine (ORN)	2-37	2-19	1-15	1-8	1-5	1-4
Lysine (LYS)	6-464	4-80	4-37	5-51	1-64	2-63