

Reporting Title: Acylglycines, QN, U**Performing Location:** Rochester**Additional Testing Requirements:**

Diagnostic specificity of inborn errors of metabolism via urine acylglycine testing is available only for selected inborn errors of metabolism; it is recommended that urine organic acids (OAU / Organic Acids Screen, Random, Urine) be ordered and assessed simultaneously due to the limited number of metabolites included in this urine acylglycine test.

Necessary Information:

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

Specimen Requirements:

Supplies: Urine Tubes, 10 mL (T068)

Container/Tube: Plastic, 10-mL urine tube

Specimen Volume: 10 mL

Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing.

Collection Instructions:

1. Collect a random urine specimen.
2. No preservative.

Specimen Minimum Volume:

4 mL

Forms:

1. Biochemical Genetics Patient Information (T602)
2. If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	416 days	
	Refrigerated	9 days	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
608931	Interpretation	Alphanumeric		53718-3
608910	n-Acetylglycine	Numeric	mg/g Cr	99059-8
608911	n-Propionylglycine	Numeric	mg/g Cr	13800-8
608912	Isobutyrylglycine	Numeric	mg/g Cr	38360-4
608913	Ethylmalonic acid	Numeric	mg/g Cr	13741-4
608914	n-Butyrylglycine	Numeric	mg/g Cr	27892-9
608915	2-Methylsuccinic acid	Numeric	mg/g Cr	13777-8
608916	2-Methylbutyrylglycine	Numeric	mg/g Cr	27097-5
608917	Isovalerylglycine	Numeric	mg/g Cr	13766-1
608918	Glutaric acid	Numeric	mg/g Cr	13748-9
608919	3-Methylcrotonylglycine	Numeric	mg/g Cr	13691-1
608920	n-Tiglylglycine	Numeric	mg/g Cr	13816-4
608921	3-Methylglutaconic acid	Alphanumeric	mg/g Cr	13692-9
608922	n-Hexanoylglycine	Numeric	mg/g Cr	13753-9
608923	n-Octanoylglycine	Numeric	mg/g Cr	38367-9
608924	3-Phenylpropionylglycine	Numeric	mg/g Cr	13793-5
608925	trans-Cinnamoylglycine	Numeric	mg/g Cr	38417-2
608926	Suberylglycine	Numeric	mg/g Cr	13811-5
608927	Dodecanedioic acid	Numeric	mg/g Cr	13732-3
608928	Tetradecanedioic acid	Numeric	mg/g Cr	50333-4
608929	Hexadecanedioic acid	Numeric	mg/g Cr	50332-6
608930	Reviewed By	Alphanumeric		18771-6

LOINC and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82542

Reference Values:

Reference Values; Expressed as mg/g creatinine						
	< or =11 Months		12-23 Months		24-35 Months	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.18-1.30	0.18-1.30	0.17-1.29	0.17-1.29	0.17-1.28	0.17-1.28
n-Propionylglycine	0.16-0.91	0.16-0.91	0.16-0.91	0.16-0.91	0.16-0.90	0.16-0.90
Isobutyrylglycine	0.17-2.50	0.17-2.50	0.17-2.49	0.17-2.49	0.17-2.47	0.17-2.47
Ethylmalonic acid	2.18-15.29	2.06-17.30	2.15-15.13	2.03-17.08	2.11-14.94	2.00-16.82
n-Butyrylglycine	0.20-1.37	0.19-1.29	0.20-1.36	0.19-1.28	0.20-1.34	0.19-1.26
2-Methylsuccinic acid	1.16-5.97	1.09-6.10	1.14-5.89	1.07-6.01	1.13-5.79	1.05-5.91
2-Methylbutyrylglycine	0.10-1.42	0.09-1.40	0.10-1.40	0.09-1.39	0.10-1.38	0.09-1.37
Isovalerylglycine	0.47-7.15	0.47-7.15	0.48-7.13	0.48-7.13	0.48-7.10	0.48-7.10
Glutaric acid	0.45-6.20	0.47-6.02	0.45-6.11	0.46-5.92	0.44-6.00	0.46-5.81
3-Methylcrotonylglycine	0.28-1.55	0.28-1.55	0.28-1.53	0.28-1.53	0.28-1.50	0.28-1.50
n-Tiglylglycine	1.05-5.76	1.05-5.76	1.05-5.67	1.05-5.67	1.05-5.56	1.05-5.56
3-Methylglutaconic acid	2.79-12.73	2.79-12.73	2.77-12.60	2.77-12.60	2.75-12.43	2.75-12.43
n-Hexanoylglycine	0.35-1.70	0.36-1.67	0.35-1.69	0.36-1.66	0.35-1.68	0.35-1.65
n-Octanoylglycine	0.16-1.60	0.16-1.60	0.16-1.59	0.16-1.59	0.16-1.58	0.16-1.58
3-Phenylpropionylglycine	0.08-1.10	0.07-1.06	0.08-1.09	0.07-1.05	0.08-1.09	0.07-1.05
trans-Cinnamoylglycine	0.41-4.81	0.40-4.73	0.41-4.81	0.40-4.73	0.41-4.81	0.40-4.73
Suberylglycine	0.38-3.09	0.38-3.09	0.38-3.05	0.38-3.05	0.37-3.01	0.37-3.01
Dodecanedioic acid	0.01-0.09	0.01-0.09	0.01-0.09	0.01-0.09	0.01-0.09	0.01-0.09
Tetradecanedioic acid	0.01-0.07	0.01-0.07	0.01-0.07	0.01-0.07	0.01-0.06	0.01-0.06
Hexadecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04

	3 Years		4 Years		5 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.17-1.26	0.17-1.26	0.17-1.24	0.17-1.24	0.17-1.21	0.17 - 1.21
n-Propionylglycine	0.16-0.89	0.16-0.89	0.16-0.88	0.16-0.88	0.16-0.87	0.16-0.87
Isobutyrylglycine	0.17-2.46	0.17-2.46	0.17-2.43	0.17-2.43	0.17-2.39	0.17-2.39
Ethylmalonic acid	2.08-14.72	1.97-16.53	2.01-14.31	1.91-16.00	1.94-13.85	1.84-15.41

n-Butyrylglycine	0.20-1.32	0.19-1.24	0.20-1.29	0.19-1.21	0.19-1.25	0.19-1.18
2-Methylsuccinic acid	1.10-5.69	1.03-5.80	1.06-5.50	0.99-5.59	1.02-5.28	0.95-5.35
2-Methylbutyrylglycine	0.10-1.36	0.08-1.36	0.10-1.32	0.08-1.32	0.10-1.28	0.08-1.29
Isovalerylglucine	0.48-7.07	0.48-7.07	0.49-7.00	0.49-7.00	0.50-6.92	0.50-6.92
Glutaric acid	0.43-5.88	0.45-5.68	0.42-5.65	0.44-5.44	0.41-5.39	0.43-5.17
3-Methylcrotonylglycine	0.28-1.47	0.28-1.47	0.28-1.42	0.28-1.42	0.28-1.35	0.28-1.35
n-Tiglylglycine	1.05-5.44	1.05-5.44	1.04-5.22	1.04-5.22	1.03-4.98	1.03-4.98
3-Methylglutaconic acid	2.72-12.25	2.72-12.25	2.68-11.90	2.68-11.90	2.62-11.50	2.62-11.50
n-Hexanoylglycine	0.34-1.66	0.35-1.64	0.34-1.64	0.34-1.61	0.33-1.62	0.34-1.59
n-Octanoylglycine	0.16-1.57	0.16-1.57	0.16-1.55	0.16-1.55	0.16-1.53	0.16-1.53
3-Phenylpropionylglycine	0.08-1.08	0.08-1.04	0.08-1.07	0.08-1.04	0.08-1.06	0.08-1.03
trans-Cinnamoylglycine	0.42-4.80	0.40-4.73	0.42-4.80	0.40-4.73	0.42-4.78	0.40-4.72
Suberylglucine	0.37-2.97	0.37-2.97	0.36-2.90	0.36-2.90	0.35-2.82	0.35-2.82
Dodecanedioic acid	0.01-0.09	0.01-0.09	0.01-0.09	0.01-0.09	0.01-0.08	0.01-0.08
Tetradecanedioic acid	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06
Hexadecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04

	6 Years		7 Years		8 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglucine	0.16-1.18	0.16-1.18	0.16-1.15	0.16-1.15	0.15-1.12	0.15-1.12
n-Propionylglucine	0.16-0.85	0.16-0.85	0.15-0.83	0.15-0.83	0.15-0.81	0.15-0.81
Isobutyrylglycine	0.17-2.35	0.17-2.35	0.17-2.31	0.17-2.30	0.17-2.26	0.16-2.25
Ethylmalonic acid	1.86-13.33	1.76-14.76	1.77-12.77	1.68-14.07	1.69-12.18	1.61-13.39
n-Butyrylglycine	0.19-1.21	0.19-1.14	0.19-1.17	0.18-1.10	0.19-1.14	0.18-1.06
2-Methylsuccinic acid	0.97-5.05	0.90-5.09	0.92-4.80	0.85-4.80	0.86-4.56	0.80-4.52
2-Methylbutyrylglycine	0.10-1.23	0.08-1.25	0.09-1.19	0.08-1.21	0.09-1.14	0.08-1.16
Isovalerylglucine	0.51-6.82	0.51-6.82	0.51-6.69	0.51-6.69	0.52-6.55	0.52-6.55
Glutaric acid	0.40-5.10	0.42-4.87	0.39-4.79	0.40-4.54	0.37-4.47	0.39-4.21
3-Methylcrotonylglycine	0.28-1.29	0.28-1.29	0.27-1.22	0.27-1.22	0.27-1.16	0.27-1.16
n-Tiglylglycine	1.01-4.73	1.01-4.73	0.99-4.46	0.99-4.46	0.96-4.22	0.96-4.22
3-Methylglutaconic acid	2.55-11.05	2.55-11.05	2.48-10.55	2.48-10.55	2.40-10.05	2.40-10.05
n-Hexanoylglycine	0.33-1.59	0.33-1.56	0.32-1.56	0.32-1.53	0.31-1.53	0.31-1.50

n-Octanoylglycine	0.16-1.51	0.16-1.51	0.15-1.49	0.15-1.49	0.15-1.47	0.15-1.47
3-Phenylpropionylglycine	0.08-1.04	0.08-1.02	0.08-1.03	0.08-1.01	0.08-1.02	0.08-1.00
trans-Cinnamoylglycine	0.43-4.76	0.40-4.71	0.43-4.74	0.40-4.69	0.43-4.71	0.40-4.65
Suberylglycine	0.34-2.74	0.34-2.74	0.32-2.66	0.32-2.66	0.31-2.58	0.31-2.58
Dodecanedioic acid	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08
Tetradecanedioic acid	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.05	0.01-0.05
Hexadecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.03	0.01-0.03

	9 Years		10 Years		11 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.15-1.09	0.15-1.09	0.15-1.07	0.15-1.07	0.14-1.04	0.14-1.04
n-Propionylglycine	0.14-0.79	0.14-0.79	0.13-0.77	0.13-0.77	0.13-0.76	0.13-0.76
Isobutyrylglycine	0.17-2.21	0.16-2.20	0.17-2.16	0.16-2.15	0.17-2.11	0.16-2.10
Ethylmalonic acid	1.62-11.59	1.53-12.73	1.55-11.00	1.47-12.10	1.49-10.43	1.41-11.52
n-Butyrylglycine	0.18-1.10	0.18-1.03	0.18-1.07	0.18-0.99	0.18-1.05	0.17-0.96
2-Methylsuccinic acid	0.81-4.32	0.75-4.24	0.76-4.10	0.71-3.98	0.71-3.90	0.67-3.75
2-Methylbutyrylglycine	0.09-1.09	0.08-1.13	0.09-1.05	0.08-1.09	0.09-1.01	0.08-1.06
Isovalerylglycine	0.52-6.40	0.52-6.40	0.53-6.24	0.53-6.24	0.53-6.07	0.53-6.07
Glutaric acid	0.36-4.16	0.37-3.88	0.36-3.87	0.36-3.57	0.35-3.60	0.35-3.28
3-Methylcrotonylglycine	0.26-1.10	0.26-1.10	0.25-1.04	0.25-1.04	0.24-1.00	0.24-1.00
n-Tiglylglycine	0.93-4.00	0.93-4.00	0.90-3.80	0.90-3.80	0.87-3.64	0.87-3.64
3-Methylglutaconic acid	2.32-9.54	2.32-9.54	2.23-9.07	2.23-9.07	2.15-8.63	2.15-8.63
n-Hexanoylglycine	0.30-1.50	0.30-1.46	0.29-1.47	0.29-1.43	0.29-1.45	0.28-1.39
n-Octanoylglycine	0.15-1.45	0.15-1.45	0.15-1.44	0.15-1.44	0.15-1.42	0.15-1.42
3-Phenylpropionylglycine	0.08-1.00	0.08-1.00	0.08-1.00	0.09-0.99	0.08-0.99	0.09-0.98
trans-Cinnamoylglycine	0.43-4.67	0.40-4.60	0.42-4.63	0.40-4.54	0.42-4.59	0.39-4.46
Suberylglycine	0.30-2.52	0.30-2.52	0.29-2.46	0.29-2.46	0.28-2.42	0.28-2.42
Dodecanedioic acid	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08
Tetradecanedioic acid	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05
Hexadecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03

	12 Years	13 Years	14 Years
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	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.14-1.01	0.14-1.01	0.14-0.98	0.14-0.98	0.13-0.95	0.13-0.95
n-Propionylglycine	0.13-0.74	0.13-0.74	0.12-0.72	0.12-0.72	0.12-0.71	0.12-0.71
Isobutyrylglycine	0.17-2.05	0.16-2.05	0.17-2.00	0.16-2.01	0.17-1.95	0.16-1.97
Ethylmalonic acid	1.44-9.88	1.36-10.99	1.40-9.36	1.31-10.50	1.37-8.88	1.28-10.04
n-Butyrylglycine	0.18-1.03	0.17-0.93	0.18-1.01	0.17-0.90	0.18-1.00	0.17-0.88
2-Methylsuccinic acid	0.67-3.71	0.63-3.54	0.64-3.53	0.60-3.35	0.61-3.37	0.58-3.19
2-Methylbutyrylglycine	0.09-0.98	0.08-1.03	0.09-0.95	0.08-1.01	0.09-0.93	0.08-0.99
Isovalerylglycine	0.53-5.90	0.53-5.90	0.53-5.73	0.53-5.73	0.53-5.56	0.53-5.56
Glutaric acid	0.35-3.35	0.35-3.00	0.34-3.13	0.34-2.75	0.34-2.94	0.34-2.53
3-Methylcrotonylglycine	0.24-0.96	0.24-0.96	0.23-0.93	0.23-0.93	0.23-0.91	0.23-0.91
n-Tiglylglycine	0.84-3.51	0.84-3.51	0.82-3.40	0.82-3.40	0.80-3.30	0.80-3.30
3-Methylglutaconic acid	2.07-8.25	2.07-8.25	2.01-7.93	2.01-7.93	1.95-7.67	1.95-7.67
n-Hexanoylglycine	0.28-1.43	0.27-1.36	0.27-1.41	0.26-1.32	0.27-1.39	0.26-1.28
n-Octanoylglycine	0.15-1.41	0.15-1.41	0.15-1.39	0.15-1.39	0.14-1.38	0.14-1.38
3-Phenylpropionylglycine	0.08-0.98	0.09-0.98	0.08-0.97	0.09-0.97	0.08-0.97	0.09-0.96
trans-Cinnamoylglycine	0.41-4.54	0.39-4.36	0.40-4.49	0.38-4.26	0.39-4.44	0.38-4.14
Suberylglycine	0.28-2.38	0.28-2.38	0.27-2.35	0.27-2.35	0.27-2.33	0.27-2.33
Dodecanedioic acid	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.08	0.01-0.07	0.01-0.07
Tetradecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Hexadecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03

	15 Years		16 Years		17 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.13-0.92	0.13-0.92	0.14-0.89	0.14-0.89	0.14-0.87	0.14-0.87
n-Propionylglycine	0.13-0.70	0.13-0.70	0.13-0.69	0.13-0.69	0.13-0.69	0.13-0.69
Isobutyrylglycine	0.18-1.90	0.16-1.93	0.18-1.85	0.16-1.89	0.18-1.81	0.17-1.85
Ethylmalonic acid	1.35-8.44	1.25-9.61	1.33-8.05	1.23-9.20	1.32-7.72	1.22-8.79
n-Butyrylglycine	0.18-0.99	0.17-0.86	0.18-0.98	0.17-0.84	0.19-0.97	0.17-0.82
2-Methylsuccinic acid	0.58-3.22	0.56-3.05	0.56-3.08	0.55-2.92	0.55-2.96	0.54-2.81
2-Methylbutyrylglycine	0.09-0.91	0.08-0.97	0.09-0.90	0.08-0.95	0.09-0.89	0.09-0.94
Isovalerylglycine	0.53-5.39	0.53-5.39	0.53-5.23	0.53-5.23	0.53-5.07	0.53-5.07

Glutaric acid	0.34-2.77	0.34-2.32	0.34-2.63	0.34-2.14	0.34-2.50	0.34-1.98
3-Methylcrotonylglycine	0.23-0.89	0.23-0.89	0.23-0.87	0.23-0.87	0.24-0.86	0.24-0.86
n-Tiglylglycine	0.80-3.22	0.80-3.22	0.80-3.14	0.80-3.14	0.81-3.06	0.81-3.06
3-Methylglutaconic acid	1.91-7.48	1.91-7.48	1.89-7.34	1.89-7.34	1.90-7.25	1.90-7.25
n-Hexanoylglycine	0.26-1.38	0.25-1.24	0.26-1.37	0.26-1.20	0.26-1.35	0.26-1.16
n-Octanoylglycine	0.14-1.37	0.14-1.37	0.15-1.37	0.15-1.37	0.15-1.36	0.15-1.36
3-Phenylpropionylglycine	0.09-0.96	0.10-0.96	0.09-0.96	0.10-0.95	0.09-0.96	0.10-0.94
trans-Cinnamoylglycine	0.39-4.38	0.37-4.01	0.38-4.33	0.37-3.88	0.38-4.28	0.36-3.74
Suberylglycine	0.26-2.31	0.26-2.31	0.26-2.29	0.26-2.29	0.26-2.27	0.26-2.27
Dodecanedioic acid	0.01-0.07	0.01-0.07	0.01-0.07	0.01-0.07	0.01-0.07	0.01-0.07
Tetradecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02

	18 Years		19 Years		20 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.14-0.85	0.14-0.85	0.14-0.83	0.14-0.83	0.14-0.81	0.14-0.81
n-Propionylglycine	0.14-0.68	0.14-0.68	0.14-0.67	0.14-0.67	0.15-0.67	0.15-0.67
Isobutyrylglycine	0.18-1.77	0.18-1.82	0.19-1.74	0.19-1.78	0.19-1.71	0.19-1.74
Ethylmalonic acid	1.32-7.44	1.22-8.40	1.32-7.22	1.22-8.00	1.32-7.04	1.22-7.60
n-Butyrylglycine	0.19-0.96	0.18-0.80	0.19-0.95	0.18-0.78	0.19-0.94	0.19-0.77
2-Methylsuccinic acid	0.54-2.85	0.53-2.71	0.54-2.75	0.53-2.63	0.53-2.67	0.53-2.55
2-Methylbutyrylglycine	0.09-0.88	0.09-0.93	0.10-0.88	0.09-0.91	0.10-0.87	0.09-0.90
Isovalerylglycine	0.53-4.91	0.53-4.91	0.53-4.76	0.53-4.76	0.54-4.62	0.54-4.62
Glutaric acid	0.34-2.39	0.34-1.83	0.35-2.29	0.35-1.70	0.35-2.20	0.35-1.59
3-Methylcrotonylglycine	0.24-0.85	0.24-0.85	0.25-0.84	0.25-0.84	0.26-0.83	0.26-0.83
n-Tiglylglycine	0.83-2.98	0.83-2.98	0.85-2.90	0.85-2.90	0.87-2.83	0.87-2.83
3-Methylglutaconic acid	1.93-7.19	1.93-7.19	1.99-7.15	1.99-7.15	2.07-7.11	2.07-7.11
n-Hexanoylglycine	0.26-1.34	0.26-1.13	0.26-1.32	0.27-1.09	0.26-1.30	0.28-1.06
n-Octanoylglycine	0.15-1.35	0.15-1.35	0.15-1.35	0.15-1.35	0.15-1.34	0.15-1.34
3-Phenylpropionylglycine	0.09-0.95	0.10-0.93	0.09-0.95	0.11-0.92	0.09-0.95	0.11-0.91
trans-Cinnamoylglycine	0.38-4.24	0.36-3.60	0.38-4.19	0.36-3.45	0.38-4.16	0.36-3.31
Suberylglycine	0.26-2.26	0.26-2.26	0.26-2.24	0.26-2.24	0.26-2.22	0.26-2.22

Dodecanedioic acid	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06	0.01-0.06
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02

	21 Years		22 Years		23 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.15-0.80	0.15-0.80	0.15-0.79	0.15-0.79	0.15-0.78	0.15-0.78
n-Propionylglycine	0.16-0.66	0.16-0.66	0.16-0.65	0.16-0.65	0.17-0.64	0.17-0.64
Isobutyrylglycine	0.19-1.69	0.20-1.70	0.19-1.68	0.21-1.66	0.19-1.66	0.22-1.62
Ethylmalonic acid	1.33-6.92	1.23-7.19	1.33-6.84	1.24-6.80	1.34-6.78	1.25-6.41
n-Butyrylglycine	0.20-0.92	0.19-0.75	0.20-0.91	0.19-0.74	0.20-0.90	0.20-0.72
2-Methylsuccinic acid	0.54-2.62	0.53-2.48	0.54-2.58	0.54-2.42	0.55-2.55	0.54-2.37
2-Methylbutyrylglycine	0.10-0.87	0.10-0.88	0.10-0.87	0.10-0.86	0.10-0.86	0.10-0.84
Isovalerylglucine	0.54-4.49	0.54-4.49	0.55-4.37	0.55-4.37	0.56-4.26	0.56-4.26
Glutaric acid	0.35-2.13	0.35-1.49	0.35-2.06	0.36-1.41	0.35-2.00	0.36-1.34
3-Methylcrotonylglycine	0.28-0.83	0.28-0.83	0.29-0.82	0.29-0.82	0.30-0.82	0.30-0.82
n-Tiglylglycine	0.90-2.76	0.90-2.76	0.93-2.70	0.93-2.70	0.95-2.64	0.95-2.64
3-Methylglutaconic acid	2.17-7.07	2.17-7.07	2.29-7.02	2.29-7.02	2.41-6.95	2.41-6.95
n-Hexanoylglycine	0.26-1.29	0.28-1.03	0.26-1.27	0.29-1.00	0.26-1.26	0.29-0.98
n-Octanoylglycine	0.15-1.33	0.15-1.33	0.16-1.32	0.16-1.32	0.16-1.30	0.16-1.30
3-Phenylpropionylglycine	0.10-0.94	0.11-0.89	0.10-0.94	0.12-0.88	0.10-0.94	0.12-0.87
trans-Cinnamoylglycine	0.38-4.13	0.36-3.17	0.39-4.10	0.36-3.02	0.39-4.08	0.37-2.89
Suberylglucine	0.26-2.21	0.26-2.21	0.26-2.19	0.26-2.19	0.26-2.17	0.26-2.17
Dodecanedioic acid	0.01-0.06	0.01-0.06	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02

	24 Years		25 Years		26 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.15-0.77	0.15-0.77	0.15-0.75	0.15-0.75	0.15-0.73	0.15-0.73
n-Propionylglycine	0.17-0.62	0.17-0.62	0.17-0.61	0.17-0.61	0.18-0.59	0.18-0.59
Isobutyrylglycine	0.20-1.65	0.22-1.57	0.20-1.65	0.22-1.52	0.20-1.64	0.23-1.48

Ethylmalonic acid	1.35-6.74	1.25-6.04	1.36-6.72	1.26-5.69	1.37-6.70	1.27-5.38
n-Butyrylglycine	0.20-0.89	0.20-0.71	0.20-0.87	0.20-0.70	0.20-0.86	0.20-0.69
2-Methylsuccinic acid	0.55-2.54	0.55-2.32	0.56-2.54	0.56-2.28	0.57-2.54	0.56-2.24
2-Methylbutyrylglycine	0.10-0.86	0.11-0.82	0.11-0.86	0.11-0.79	0.11-0.85	0.11-0.77
Isovalerylglycine	0.56-4.16	0.56-4.16	0.56-4.08	0.56-4.08	0.56-4.01	0.56-4.01
Glutaric acid	0.35-1.94	0.36-1.28	0.35-1.88	0.36-1.24	0.34-1.83	0.36-1.21
3-Methylcrotonylglycine	0.31-0.81	0.31-0.81	0.31-0.81	0.31-0.81	0.32-0.81	0.32-0.81
n-Tiglylglycine	0.97-2.59	0.97-2.59	0.98-2.55	0.98-2.55	0.99-2.51	0.99-2.51
3-Methylglutaconic acid	2.53-6.88	2.53-6.88	2.63-6.78	2.63-6.78	2.72-6.69	2.72-6.69
n-Hexanoylglycine	0.27-1.24	0.30-0.95	0.27-1.23	0.30-0.94	0.27-1.22	0.30-0.92
n-Octanoylglycine	0.16-1.29	0.16-1.29	0.17-1.28	0.17-1.28	0.17-1.26	0.17-1.26
3-Phenylpropionylglycine	0.10-0.94	0.12-0.86	0.11-0.93	0.13-0.85	0.11-0.93	0.13-0.84
trans-Cinnamoylglycine	0.39-4.07	0.38-2.76	0.39-4.06	0.39-2.64	0.40-4.06	0.39-2.54
Suberylglycine	0.27-2.16	0.27-2.16	0.27-2.14	0.27-2.14	0.27-2.12	0.27-2.12
Dodecanedioic acid	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.05
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	27 Years		28 Years		29 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.15-0.71	0.15-0.71	0.15-0.69	0.15-0.69	0.15-0.67	0.15-0.67
n-Propionylglycine	0.18-0.57	0.18-0.57	0.19-0.56	0.19-0.56	0.19-0.54	0.19-0.54
Isobutyrylglycine	0.20-1.63	0.23-1.44	0.21-1.62	0.23-1.41	0.21-1.61	0.22-1.38
Ethylmalonic acid	1.38-6.67	1.27-5.11	1.39-6.64	1.28-4.88	1.41-6.59	1.28-4.69
n-Butyrylglycine	0.21-0.84	0.20-0.68	0.21-0.83	0.20-0.67	0.21-0.82	0.20-0.66
2-Methylsuccinic acid	0.58-2.54	0.57-2.21	0.59-2.54	0.57-2.17	0.59-2.53	0.58-2.14
2-Methylbutyrylglycine	0.11-0.85	0.12-0.75	0.11-0.85	0.12-0.73	0.11-0.85	0.12-0.71
Isovalerylglycine	0.56-3.94	0.56-3.94	0.56-3.88	0.56-3.88	0.55-3.82	0.55-3.82
Glutaric acid	0.34-1.78	0.36-1.19	0.34-1.73	0.36-1.18	0.34-1.69	0.35-1.17
3-Methylcrotonylglycine	0.32-0.80	0.32-0.80	0.32-0.80	0.32-0.80	0.32-0.80	0.32-0.80
n-Tiglylglycine	1.00-2.48	1.00-2.48	1.00-2.45	1.00-2.45	1.00-2.43	1.00-2.43
3-Methylglutaconic acid	2.78-6.58	2.78-6.58	2.82-6.49	2.82-6.49	2.82-6.39	2.82-6.39

n-Hexanoylglycine	0.27-1.21	0.30-0.90	0.27-1.21	0.30-0.89	0.28-1.20	0.30-0.88
n-Octanoylglycine	0.17-1.25	0.17-1.25	0.17-1.24	0.17-1.24	0.18-1.23	0.18-1.23
3-Phenylpropionylglycine	0.11-0.93	0.13-0.83	0.12-0.92	0.14-0.82	0.12-0.92	0.14-0.81
trans-Cinnamoylglycine	0.40-4.06	0.40-2.44	0.41-4.06	0.41-2.37	0.42-4.06	0.42-2.32
Suberylglycine	0.28-2.10	0.28-2.10	0.28-2.08	0.28-2.08	0.29-2.06	0.29-2.06
Dodecanedioic acid	0.01-0.05	0.01-0.05	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	30 Years		31 Years		32 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.15-0.64	0.15-0.64	0.16-0.62	0.16-0.62	0.16-0.60	0.16-0.60
n-Propionylglycine	0.19-0.52	0.19-0.52	0.20-0.50	0.20-0.50	0.20-0.49	0.20-0.49
Isobutyrylglycine	0.21-1.60	0.22-1.37	0.21-1.59	0.22-1.36	0.21-1.58	0.22-1.35
Ethylmalonic acid	1.42-6.54	1.28-4.54	1.43-6.48	1.29-4.42	1.44-6.42	1.29-4.32
n-Butyrylglycine	0.21-0.81	0.20-0.66	0.21-0.80	0.20-0.66	0.22-0.79	0.20-0.66
2-Methylsuccinic acid	0.60-2.52	0.58-2.10	0.60-2.50	0.58-2.05	0.61-2.47	0.58-2.01
2-Methylbutyrylglycine	0.11-0.85	0.12-0.70	0.11-0.85	0.12-0.69	0.11-0.85	0.12-0.68
Isovalerylglycine	0.55-3.77	0.55-3.77	0.54-3.72	0.54-3.72	0.53-3.68	0.53-3.68
Glutaric acid	0.35-1.65	0.35-1.17	0.35-1.61	0.35-1.17	0.35-1.58	0.35-1.17
3-Methylcrotonylglycine	0.32-0.79	0.32-0.79	0.31-0.79	0.31-0.79	0.31-0.78	0.31-0.78
n-Tiglylglycine	0.99-2.41	0.99-2.41	0.98-2.39	0.98-2.39	0.97-2.37	0.97-2.37
3-Methylglutaconic acid	2.80-6.30	2.80-6.30	2.77-6.21	2.77-6.21	2.71-6.13	2.71-6.13
n-Hexanoylglycine	0.28-1.20	0.29-0.87	0.28-1.20	0.29-0.86	0.29-1.20	0.28-0.85
n-Octanoylglycine	0.18-1.22	0.18-1.22	0.18-1.21	0.18-1.21	0.18-1.19	0.18-1.19
3-Phenylpropionylglycine	0.12-0.92	0.14-0.80	0.12-0.91	0.14-0.80	0.12-0.91	0.13-0.79
trans-Cinnamoylglycine	0.43-4.05	0.43-2.28	0.44-4.05	0.44-2.25	0.45-4.04	0.44-2.24
Suberylglycine	0.29-2.04	0.29-2.04	0.30-2.02	0.30-2.02	0.30-1.99	0.30-1.99
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	33 Years		34 Years		35 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.16-0.59	0.16-0.59	0.17-0.58	0.17-0.58	0.17-0.56	0.17-0.56
n-Propionylglycine	0.20-0.48	0.20-0.48	0.21-0.47	0.21-0.47	0.21-0.46	0.21-0.46
Isobutyrylglycine	0.21-1.57	0.22-1.35	0.22-1.56	0.23-1.35	0.22-1.55	0.23-1.35
Ethylmalonic acid	1.45-6.35	1.29-4.24	1.45-6.28	1.30-4.18	1.45-6.22	1.30-4.12
n-Butyrylglycine	0.22-0.78	0.21-0.66	0.22-0.77	0.21-0.65	0.22-0.77	0.22-0.65
2-Methylsuccinic acid	0.61-2.44	0.58-1.96	0.61-2.41	0.58-1.92	0.61-2.38	0.58-1.88
2-Methylbutyrylglycine	0.11-0.85	0.11-0.67	0.11-0.85	0.11-0.66	0.11-0.85	0.11-0.66
Isovalerylglucose	0.52-3.65	0.52-3.65	0.51-3.62	0.51-3.62	0.50-3.60	0.50-3.60
Glutaric acid	0.35-1.55	0.35-1.16	0.35-1.53	0.35-1.16	0.36-1.52	0.35-1.15
3-Methylcrotonylglycine	0.31-0.77	0.31-0.77	0.30-0.76	0.30-0.76	0.30-0.75	0.30-0.75
n-Tiglylglycine	0.96-2.35	0.96-2.35	0.95-2.33	0.95-2.33	0.95-2.30	0.95-2.30
3-Methylglutaconic acid	2.66-6.05	2.66-6.05	2.60-5.97	2.60-5.97	2.54-5.89	2.54-5.89
n-Hexanoylglycine	0.29-1.19	0.28-0.84	0.29-1.19	0.28-0.84	0.30-1.18	0.28-0.83
n-Octanoylglycine	0.18-1.18	0.18-1.18	0.17-1.17	0.17-1.17	0.17-1.16	0.17-1.16
3-Phenylpropionylglycine	0.12-0.90	0.13-0.78	0.12-0.90	0.13-0.77	0.12-0.89	0.13-0.77
trans-Cinnamoylglycine	0.46-4.02	0.45-2.22	0.46-4.01	0.45-2.21	0.47-3.99	0.46-2.20
Suberylglucose	0.31-1.97	0.31-1.97	0.31-1.95	0.31-1.95	0.31-1.92	0.31-1.92
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	36 Years		37 Years		38 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.17-0.56	0.17-0.56	0.18-0.55	0.18-0.55	0.18-0.54	0.18-0.54
n-Propionylglycine	0.21-0.45	0.21-0.45	0.21-0.45	0.21-0.45	0.21-0.44	0.21-0.44
Isobutyrylglycine	0.22-1.54	0.23-1.35	0.22-1.52	0.24-1.34	0.22-1.51	0.25-1.33
Ethylmalonic acid	1.45-6.16	1.30-4.06	1.45-6.11	1.31-4.01	1.45-6.07	1.31-3.95
n-Butyrylglycine	0.22-0.76	0.22-0.64	0.22-0.76	0.22-0.64	0.22-0.76	0.23-0.63
2-Methylsuccinic acid	0.61-2.35	0.58-1.84	0.61-2.33	0.58-1.81	0.61-2.31	0.58-1.78
2-Methylbutyrylglycine	0.12-0.85	0.11-0.66	0.12-0.85	0.11-0.66	0.12-0.84	0.11-0.66

Isovalerylglycine	0.50-3.59	0.50-3.59	0.49-3.58	0.49-3.58	0.49-3.58	0.49-3.58
Glutaric acid	0.36-1.50	0.35-1.14	0.36-1.50	0.35-1.13	0.36-1.49	0.36-1.12
3-Methylcrotonylglycine	0.30-0.75	0.30-0.75	0.30-0.74	0.30-0.74	0.30-0.73	0.30-0.73
n-Tiglylglycine	0.94-2.27	0.94-2.27	0.94-2.24	0.94-2.24	0.94-2.20	0.94-2.20
3-Methylglutaconic acid	2.49-5.81	2.49-5.81	2.45-5.74	2.45-5.74	2.42-5.69	2.42-5.69
n-Hexanoylglycine	0.30-1.17	0.28-0.83	0.30-1.16	0.28-0.82	0.30-1.15	0.29-0.82
n-Octanoylglycine	0.17-1.15	0.17-1.15	0.17-1.13	0.17-1.13	0.17-1.12	0.17-1.12
3-Phenylpropionylglycine	0.12-0.88	0.13-0.76	0.12-0.88	0.13-0.75	0.11-0.87	0.13-0.75
trans-Cinnamoylglycine	0.47-3.98	0.47-2.17	0.46-3.96	0.47-2.14	0.46-3.95	0.48-2.09
Suberylglycine	0.31-1.90	0.31-1.90	0.32-1.88	0.32-1.88	0.32-1.86	0.32-1.86
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	39 Years		40 Years		41 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.18-0.54	0.18-0.54	0.18-0.54	0.18-0.54	0.18-0.54	0.18-0.54
n-Propionylglycine	0.20-0.44	0.20-0.44	0.20-0.44	0.20-0.44	0.19-0.44	0.19-0.44
Isobutyrylglycine	0.22-1.49	0.25-1.32	0.23-1.48	0.26-1.31	0.24-1.46	0.26-1.30
Ethylmalonic acid	1.44-6.04	1.32-3.90	1.44-6.01	1.33-3.86	1.43-5.98	1.34-3.82
n-Butyrylglycine	0.22-0.76	0.23-0.63	0.22-0.76	0.24-0.62	0.22-0.76	0.24-0.61
2-Methylsuccinic acid	0.61-2.29	0.59-1.76	0.61-2.28	0.59-1.74	0.62-2.27	0.60-1.72
2-Methylbutyrylglycine	0.12-0.84	0.11-0.66	0.13-0.84	0.11-0.66	0.13-0.84	0.11-0.65
Isovalerylglycine	0.49-3.57	0.49-3.57	0.49-3.57	0.49-3.57	0.49-3.56	0.49-3.56
Glutaric acid	0.36-1.49	0.36-1.10	0.36-1.49	0.36-1.09	0.36-1.49	0.37-1.07
3-Methylcrotonylglycine	0.30-0.73	0.30-0.73	0.30-0.73	0.30-0.73	0.30-0.73	0.30-0.73
n-Tiglylglycine	0.95-2.16	0.95-2.16	0.95-2.12	0.95-2.12	0.96-2.09	0.96-2.09
3-Methylglutaconic acid	2.40-5.64	2.40-5.64	2.38-5.60	2.38-5.60	2.36-5.57	2.36-5.57
n-Hexanoylglycine	0.31-1.14	0.29-0.82	0.31-1.13	0.30-0.81	0.31-1.12	0.30-0.81
n-Octanoylglycine	0.17-1.11	0.17-0.11	0.17-1.09	0.17-1.09	0.17-1.08	0.17-1.08
3-Phenylpropionylglycine	0.11-0.87	0.14-0.74	0.11-0.86	0.14-0.73	0.11-0.86	0.14-0.73
trans-Cinnamoylglycine	0.46-3.94	0.49-2.04	0.45-3.93	0.50-1.98	0.44-3.92	0.51-1.92

Suberylglycine	0.32-1.84	0.32-1.84	0.32-1.83	0.32-1.83	0.33-1.81	0.33-1.81
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	42 Years		43 Years		44 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53
n-Propionylglycine	0.19-0.44	0.19-0.44	0.19-0.44	0.19-0.44	0.18-0.44	0.18-0.44
Isobutyrylglycine	0.25-1.44	0.27-1.28	0.26-1.43	0.27-1.27	0.27-1.42	0.27-1.25
Ethylmalonic acid	1.43-5.95	1.35-3.77	1.42-5.91	1.37-3.74	1.42-5.85	1.38-3.69
n-Butyrylglycine	0.22-0.76	0.25-0.61	0.22-0.76	0.25-0.60	0.23-0.76	0.25-0.60
2-Methylsuccinic acid	0.62-2.26	0.61-1.71	0.63-2.26	0.62-1.70	0.64-2.25	0.63-1.68
2-Methylbutyrylglycine	0.14-0.84	0.11-0.65	0.14-0.84	0.11-0.64	0.15-0.84	0.11-0.63
Isovalerylglucine	0.49-3.54	0.49-3.54	0.49-3.51	0.49-3.51	0.49-3.48	0.49-3.48
Glutaric acid	0.36-1.49	0.37-1.05	0.37-1.49	0.38-1.03	0.37-1.49	0.38-1.01
3-Methylcrotonylglycine	0.31-0.73	0.31-0.73	0.31-0.73	0.31-0.73	0.31-0.73	0.31-0.73
n-Tiglylglycine	0.97-2.05	0.97-2.05	0.98-2.03	0.98-2.03	0.99-2.01	0.99-2.01
3-Methylglutaconic acid	2.35-5.54	2.35-5.54	2.34-5.53	2.34-5.53	2.33-5.52	2.33-5.52
n-Hexanoylglycine	0.32-1.11	0.31-0.81	0.32-1.11	0.32-0.81	0.32-1.10	0.33-0.81
n-Octanoylglycine	0.18-1.07	0.18-1.07	0.18-1.07	0.18-1.07	0.18-1.06	0.18-1.06
3-Phenylpropionylglycine	0.11-0.86	0.14-0.73	0.11-0.86	0.15-0.72	0.11-0.86	0.15-0.71
trans-Cinnamoylglycine	0.44-3.91	0.52-1.87	0.44-3.89	0.54-1.82	0.44-3.87	0.55-1.78
Suberylglycine	0.33-1.81	0.33-1.81	0.33-1.80	0.33-1.80	0.34-1.80	0.34-1.80
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	45 Years		46 Years		47 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53	0.17-0.53
n-Propionylglycine	0.18-0.43	0.18-0.43	0.18-0.43	0.18-0.43	0.18-0.43	0.18-0.43

Isobutyrylglycine	0.29-1.40	0.27-1.23	0.30-1.39	0.26-1.22	0.32-1.39	0.26-1.20
Ethylmalonic acid	1.42-5.78	1.40-3.65	1.42-5.70	1.42-3.60	1.42-5.60	1.43-3.55
n-Butyrylglycine	0.23-0.75	0.25-0.60	0.24-0.75	0.25-0.59	0.24-0.74	0.25-0.59
2-Methylsuccinic acid	0.65-2.25	0.63-1.67	0.66-2.24	0.64-1.65	0.67-2.23	0.65-1.63
2-Methylbutyrylglycine	0.15-0.84	0.11-0.62	0.15-0.84	0.11-0.61	0.16-0.84	0.11-0.60
Isovalerylglycine	0.49-3.45	0.49-3.45	0.49-3.40	0.49-3.40	0.49-3.36	0.49-3.36
Glutaric acid	0.37-1.47	0.39-0.99	0.37-1.46	0.39-0.97	0.38-1.44	0.40-0.95
3-Methylcrotonylglycine	0.31-0.73	0.31-0.73	0.32-0.73	0.32-0.73	0.32-0.73	0.32-0.73
n-Tiglylglycine	1.00-2.00	1.00-2.00	1.02-1.99	1.02-1.99	1.04-1.99	1.04-1.99
3-Methylglutaconic acid	2.33-5.52	2.33-5.52	2.34-5.51	2.34-5.51	2.35-5.51	2.35-5.51
n-Hexanoylglycine	0.33-1.09	0.33-0.80	0.34-1.09	0.34-0.80	0.34-1.08	0.35-0.80
n-Octanoylglycine	0.19-1.06	0.19-1.06	0.19-1.05	0.19-1.05	0.20-1.05	0.20-1.05
3-Phenylpropionylglycine	0.11-0.86	0.15-0.70	0.11-0.86	0.15-0.69	0.12-0.85	0.15-0.68
trans-Cinnamoylglycine	0.44-3.84	0.56-1.75	0.45-3.80	0.57-1.73	0.45-3.76	0.58-1.72
Suberylglycine	0.34-1.79	0.34-1.79	0.35-1.79	0.35-1.79	0.36-1.79	0.36-1.79
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	48 Years		49 Years		50 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.18-0.53	0.18-0.53	0.19-0.53	0.19-0.53	0.19-0.53	0.19-0.53
n-Propionylglycine	0.18-0.42	0.18-0.42	0.18-0.42	0.18-0.42	0.18-0.42	0.18-0.42
Isobutyrylglycine	0.34-1.38	0.25-1.19	0.35-1.37	0.24-1.18	0.36-1.35	0.24-1.17
Ethylmalonic acid	1.43-5.50	1.44-3.49	1.43-5.40	1.45-3.44	1.43-5.31	1.46-3.38
n-Butyrylglycine	0.25-0.73	0.25-0.59	0.26-0.72	0.25-0.59	0.26-0.70	0.25-0.59
2-Methylsuccinic acid	0.69-2.21	0.66-1.61	0.70-2.20	0.66-1.59	0.72-2.18	0.67-1.57
2-Methylbutyrylglycine	0.16-0.84	0.11-0.59	0.16-0.84	0.11-0.59	0.16-0.83	0.11-0.58
Isovalerylglycine	0.50-3.31	0.50-3.31	0.50-3.26	0.50-3.26	0.51-3.21	0.51-3.21
Glutaric acid	0.38-1.41	0.41-0.94	0.38-1.38	0.41-0.92	0.39-1.34	0.41-0.91
3-Methylcrotonylglycine	0.32-0.73	0.32-0.73	0.32-0.72	0.32-0.72	0.32-0.71	0.32-0.71
n-Tiglylglycine	1.05-1.99	1.05-1.99	1.07-1.99	1.07-1.99	1.09-1.99	1.09-1.99

3-Methylglutaconic acid	2.36-5.50	2.36-5.50	2.37-5.49	2.37-5.49	2.38-5.46	2.38-5.46
n-Hexanoylglycine	0.35-1.07	0.35-0.80	0.36-1.07	0.36-0.79	0.36-1.06	0.36-0.79
n-Octanoylglycine	0.20-1.04	0.20-1.04	0.21-1.04	0.21-1.04	0.21-1.04	0.21-1.04
3-Phenylpropionylglycine	0.12-0.85	0.15-0.67	0.13-0.85	0.15-0.66	0.14-0.84	0.15-0.65
trans-Cinnamoylglycine	0.46-3.71	0.58-1.71	0.48-3.66	0.59-1.70	0.49-3.61	0.60-1.69
Suberylglycine	0.36-1.78	0.36-1.78	0.37-1.78	0.37-1.78	0.37-1.77	0.37-1.77
Dodecanedioic acid	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.04	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	51 Years		52 Years		53 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.20-0.52	0.20-0.52	0.21-0.51	0.21-0.51	0.23-0.51	0.23-0.51
n-Propionylglycine	0.19-0.41	0.19-0.41	0.19-0.41	0.19-0.41	0.19-0.41	0.19-0.41
Isobutyrylglycine	0.37-1.34	0.23-1.16	0.38-1.32	0.23-1.15	0.38-1.29	0.23-1.14
Ethylmalonic acid	1.44-5.23	1.47-3.33	1.45-5.16	1.47-3.28	1.46-5.11	1.48-3.24
n-Butyrylglycine	0.27-0.69	0.25-0.58	0.28-0.68	0.25-0.58	0.28-0.67	0.25-0.58
2-Methylsuccinic acid	0.74-2.16	0.67-1.54	0.76-2.14	0.67-1.53	0.78-2.13	0.67-1.51
2-Methylbutyrylglycine	0.16-0.83	0.11-0.58	0.16-0.82	0.11-0.58	0.16-0.80	0.11-0.58
Isovalerylglcyline	0.52-3.17	0.52-3.17	0.53-3.12	0.53-3.12	0.54-3.08	0.54-3.08
Glutaric acid	0.39-1.30	0.41-0.90	0.39-1.27	0.41-0.89	0.40-1.23	0.41-0.89
3-Methylcrotonylglycine	0.32-0.70	0.32-0.70	0.32-0.68	0.32-0.68	0.32-0.67	0.32-0.67
n-Tiglylglycine	1.11-1.99	1.11-1.99	1.12-1.98	1.12-1.98	1.12-1.97	1.12-1.97
3-Methylglutaconic acid	2.39-5.42	2.39-5.42	2.40-5.36	2.40-5.36	2.40-5.28	2.40-5.28
n-Hexanoylglycine	0.37-1.05	0.36-0.78	0.38-1.04	0.36-0.78	0.38-1.03	0.36-0.77
n-Octanoylglycine	0.22-1.03	0.22-1.03	0.22-1.02	0.22-1.02	0.22-1.02	0.22-1.02
3-Phenylpropionylglycine	0.14-0.84	0.15-0.64	0.15-0.83	0.15-0.63	0.15-0.82	0.16-0.63
trans-Cinnamoylglycine	0.51-3.57	0.61-1.67	0.53-3.54	0.62-1.66	0.55-3.51	0.62-1.64
Suberylglycine	0.38-1.76	0.38-1.76	0.38-1.75	0.38-1.75	0.39-1.74	0.39-1.74
Dodecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	54 Years		55 Years		56 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.24-0.50	0.24-0.50	0.24-0.49	0.24-0.49	0.25-0.47	0.25-0.47
n-Propionylglycine	0.20-0.40	0.20-0.40	0.20-0.40	0.20-0.40	0.21-0.40	0.21-0.40
Isobutyrylglycine	0.38-1.26	0.23-1.13	0.38-1.22	0.23-1.12	0.37-1.19	0.23-1.11
Ethylmalonic acid	1.48-5.07	1.49-3.21	1.50-5.03	1.50-3.19	1.53-5.00	1.51-3.17
n-Butyrylglycine	0.29-0.66	0.25-0.57	0.29-0.65	0.26-0.57	0.30-0.64	0.26-0.57
2-Methylsuccinic acid	0.81-2.11	0.67-1.50	0.83-2.10	0.67-1.49	0.86-2.09	0.67-1.48
2-Methylbutyrylglycine	0.16-0.79	0.11-0.58	0.16-0.78	0.11-0.58	0.16-0.76	0.11-0.58
Isovalerylglucine	0.55-3.03	0.55-3.03	0.56-2.99	0.56-2.99	0.57-2.94	0.57-2.94
Glutaric acid	0.40-1.20	0.40-0.88	0.41-1.17	0.40-0.87	0.41-1.15	0.39-0.87
3-Methylcrotonylglycine	0.31-0.65	0.31-0.65	0.31-0.63	0.31-0.63	0.31-0.60	0.31-0.60
n-Tiglylglycine	1.12-1.94	1.12-1.94	1.12-1.92	1.12-1.92	1.11-1.88	1.11-1.88
3-Methylglutaconic acid	2.41-5.17	2.41-5.17	2.42-5.05	2.42-5.05	2.45-4.91	2.45-4.91
n-Hexanoylglycine	0.38-1.02	0.36-0.77	0.39-1.02	0.35-0.76	0.39-1.01	0.35-0.76
n-Octanoylglycine	0.23-1.01	0.23-1.01	0.23-1.00	0.23-1.00	0.23-0.98	0.23-0.98
3-Phenylpropionylglycine	0.16-0.82	0.16-0.62	0.16-0.81	0.17-0.62	0.17-0.80	0.17-0.62
trans-Cinnamoylglycine	0.57-3.49	0.62-1.63	0.59-3.47	0.62-1.61	0.62-3.45	0.62-1.59
Suberylglucine	0.39-1.73	0.39-1.73	0.40-1.72	0.40-1.72	0.41-1.71	0.41-1.71
Dodecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	57 Years		58 Years		59 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.26-0.46	0.26-0.46	0.26-0.45	0.26-0.45	0.27-0.44	0.27-0.44
n-Propionylglycine	0.22-0.40	0.22-0.40	0.22-0.40	0.22-0.40	0.23-0.40	0.23-0.40
Isobutyrylglycine	0.37-1.15	0.24-1.10	0.37-1.11	0.24-1.08	0.38-1.07	0.24-1.06
Ethylmalonic acid	1.56-4.96	1.53-3.14	1.59-4.91	1.54-3.12	1.62-4.86	1.56-3.09
n-Butyrylglycine	0.30-0.64	0.27-0.56	0.30-0.63	0.27-0.56	0.31-0.63	0.28-0.56
2-Methylsuccinic acid	0.89-2.08	0.67-1.48	0.92-2.07	0.67-1.48	0.95-2.06	0.66-1.48
2-Methylbutyrylglycine	0.16-0.74	0.11-0.57	0.16-0.73	0.12-0.56	0.16-0.71	0.12-0.55

Isovalerylglycine	0.59-2.90	0.59-2.90	0.60-2.85	0.60-2.85	0.61-2.79	0.61-2.79
Glutaric acid	0.42-1.14	0.38-0.86	0.43-1.13	0.38-0.85	0.44-1.12	0.38-0.84
3-Methylcrotonylglycine	0.30-0.58	0.30-0.58	0.30-0.56	0.30-0.56	0.30-0.54	0.30-0.54
n-Tiglylglycine	1.10-1.85	1.10-1.85	1.09-1.81	1.09-1.81	1.08-1.77	1.08-1.77
3-Methylglutaconic acid	2.48-4.76	2.48-4.76	2.53-4.60	2.53-4.60	2.59-4.44	2.59-4.44
n-Hexanoylglycine	0.39-1.00	0.35-0.76	0.39-0.99	0.36-0.75	0.39-0.99	0.36-0.75
n-Octanoylglycine	0.23-0.97	0.23-0.97	0.23-0.96	0.23-0.96	0.23-0.94	0.23-0.94
3-Phenylpropionylglycine	0.17-0.79	0.17-0.62	0.17-0.78	0.18-0.61	0.18-0.77	0.18-0.61
trans-Cinnamoylglycine	0.64-3.42	0.61-1.57	0.67-3.37	0.60-1.55	0.69-3.31	0.59-1.53
Suberylglycine	0.41-1.70	0.41-1.70	0.42-1.69	0.42-1.69	0.42-1.67	0.42-1.67
Dodecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	60 Years		61 Years		62 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.28-0.43	0.28-0.43	0.28-0.42	0.28-0.42	0.29-0.42	0.29-0.42
n-Propionylglycine	0.24-0.40	0.24-0.40	0.25-0.39	0.25-0.39	0.26-0.39	0.26-0.39
Isobutyrylglycine	0.38-1.03	0.24-1.05	0.39-1.00	0.24-1.03	0.41-0.98	0.25-1.01
Ethylmalonic acid	1.66-4.79	1.58-3.06	1.70-4.72	1.60-3.03	1.74-4.65	1.62-2.99
n-Butyrylglycine	0.31-0.63	0.28-0.56	0.32-0.62	0.28-0.56	0.32-0.62	0.29-0.56
2-Methylsuccinic acid	0.98-2.05	0.66-1.47	1.00-2.04	0.66-1.47	1.02-2.03	0.66-1.46
2-Methylbutyrylglycine	0.17-0.70	0.12-0.53	0.17-0.69	0.12-0.52	0.17-0.68	0.12-0.50
Isovalerylglycine	0.62-2.73	0.62-2.73	0.62-2.66	0.62-2.66	0.62-2.59	0.62-2.59
Glutaric acid	0.45-1.11	0.37-0.82	0.46-1.10	0.37-0.81	0.47-1.09	0.37-0.79
3-Methylcrotonylglycine	0.29-0.52	0.29-0.52	0.29-0.51	0.29-0.51	0.29-0.50	0.29-0.50
n-Tiglylglycine	1.07-1.74	1.07-1.74	1.06-1.71	1.06-1.71	1.06-1.70	1.06-1.70
3-Methylglutaconic acid	2.67-4.30	2.67-4.30	2.75-4.16	2.75-4.16	2.83-4.04	2.83-4.04
n-Hexanoylglycine	0.39-0.98	0.36-0.74	0.40-0.97	0.37-0.74	0.40-0.96	0.37-0.73
n-Octanoylglycine	0.23-0.92	0.23-0.92	0.23-0.90	0.23-0.90	0.23-0.89	0.23-0.89
3-Phenylpropionylglycine	0.18-0.76	0.18-0.61	0.18-0.74	0.18-0.60	0.19-0.73	0.18-0.59
trans-Cinnamoylglycine	0.71-3.22	0.58-1.51	0.72-3.12	0.57-1.49	0.73-3.00	0.55-1.48

Suberylglycine	0.43-1.66	0.43-1.66	0.43-1.64	0.43-1.64	0.43-1.62	0.43-1.62
Dodecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	63 Years		64 Years		65 Years	
	Female	Male	Female	Male	Female	Male
n-Acetylglycine	0.29-0.41	0.29-0.41	0.29-0.41	0.29-0.41	0.30-0.41	0.30-0.41
n-Propionylglycine	0.27-0.39	0.27-0.39	0.28-0.39	0.28-0.39	0.28-0.38	0.28-0.38
Isobutyrylglycine	0.42-0.95	0.24-1.00	0.44-0.94	0.24-0.98	0.46-0.93	0.24-0.98
Ethylmalonic acid	1.77-4.57	1.64-2.95	1.80-4.51	1.65-2.92	1.83-4.45	1.66-2.89
n-Butyrylglycine	0.33-0.62	0.28-0.56	0.33-0.62	0.28-0.56	0.33-0.62	0.28-0.56
2-Methylsuccinic acid	1.04-2.03	0.66-1.46	1.05-2.02	0.66-1.45	1.07-2.02	0.66-1.44
2-Methylbutyrylglycine	0.18-0.67	0.13-0.49	0.18-0.66	0.13-0.47	0.19-0.65	0.13-0.46
Isovalerylglucine	0.62-2.52	0.62-2.52	0.62-2.44	0.62-2.44	0.62-2.37	0.62-2.37
Glutaric acid	0.48-1.08	0.37-0.77	0.49-1.07	0.37-0.75	0.49-1.06	0.37-0.74
3-Methylcrotonylglycine	0.29-0.49	0.29-0.49	0.30-0.48	0.30-0.48	0.30-0.48	0.30-0.48
n-Tiglylglycine	1.06-1.68	1.06-1.68	1.06-1.67	1.06-1.67	1.06-1.67	1.06-1.67
3-Methylglutaconic acid	2.91-3.94	2.91-3.94	2.99-3.86	2.99-3.86	3.05-3.80	3.05-3.80
n-Hexanoylglycine	0.41-0.95	0.38-0.73	0.42-0.95	0.38-0.72	0.43-0.94	0.38-0.72
n-Octanoylglycine	0.22-0.87	0.22-0.87	0.22-0.85	0.22-0.85	0.22-0.84	0.22-0.84
3-Phenylpropionylglycine	0.19-0.71	0.17-0.58	0.20-0.70	0.17-0.58	0.21-0.69	0.16-0.57
trans-Cinnamoylglycine	0.74-2.88	0.53-1.46	0.75-2.76	0.52-1.45	0.75-2.64	0.50-1.44
Suberylglycine	0.43-1.59	0.43-1.59	0.43-1.57	0.43-1.57	0.42-1.55	0.42-1.55
Dodecanedioic acid	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01	0.01-0.01

	> or = 66 Years	
	Female	Male
n-Acetylglycine	0.30-0.41	0.30-0.41
n-Propionylglycine	0.29-0.38	0.29-0.38

Isobutyrylglycine	0.46-0.92	0.24-0.97
Ethylmalonic acid	1.84-4.42	1.67-2.86
n-Butyrylglycine	0.33-0.62	0.27-0.56
2-Methylsuccinic acid	1.07-2.02	0.66-1.43
2-Methylbutyrylglycine	0.19-0.65	0.13-0.45
Isovalerylglucose	0.61-2.31	0.61-2.31
Glutaric acid	0.49-1.06	0.38-0.73
3-Methylcrotonylglycine	0.30-0.48	0.30-0.48
n-Tiglylglycine	1.07-1.67	1.07-1.67
3-Methylglutaconic acid	3.11-3.75	3.11-3.75
n-Hexanoylglycine	0.43-0.94	0.38-0.71
n-Octanoylglycine	0.21-0.82	0.21-0.82
3-Phenylpropionylglycine	0.21-0.69	0.16-0.56
trans-Cinnamoylglycine	0.75-2.58	0.50-1.43
Suberylglucose	0.42-1.52	0.42-1.52
Dodecanedioic acid	0.01-0.03	0.01-0.03
Tetradecanedioic acid	0.01-0.02	0.01-0.02
Hexadecanedioic acid	0.01-0.01	0.01-0.01