

## APPENDIX 1

# CONVERSIONS

### A1c, GLYCATED\* HEMOGLOBIN

%	mmol/mol†	%	mmol/mol	%	mmol/mol	%	mmol/mol
3.0	9	5.5	37	8.0	64	10.5	91
3.1	10	5.6	38	8.1	65	10.6	92
3.2	11	5.7	39	8.2	66	10.7	93
3.3	13	5.8	40	8.3	67	10.8	95
3.4	14	5.9	41	8.4	68	10.9	96
3.5	15	6.0	42	8.5	69	11.0	97
3.6	16	6.1	43	8.6	70	11.5	102
3.7	17	6.2	44	8.7	72	12.0	108
3.8	18	6.3	45	8.8	73	12.5	113
3.9	19	6.4	46	8.9	74	13.0	119
4.0	20	6.5	48	9.0	75	13.5	124
4.1	21	6.6	49	9.1	76	14.0	130
4.2	22	6.7	50	9.2	77	14.5	135
4.3	23	6.8	51	9.3	78	15.0	140
4.4	25	6.9	52	9.4	79	15.5	146
4.5	26	7.0	53	9.5	80	16.0	151
4.6	27	7.1	54	9.6	81	16.5	157
4.7	28	7.2	55	9.7	83	17.0	162
4.8	29	7.3	56	9.8	84	17.5	168
4.9	30	7.4	57	9.9	85	18.0	173
5.0	31	7.5	58	10.0	86	18.5	179
5.1	32	7.6	60	10.1	87	19.0	184
5.2	33	7.7	61	10.2	88	19.5	190
5.3	34	7.8	62	10.3	89	20.0	195
5.4	36	7.9	63	10.4	90		

\* The term “glycated” hemoglobin is used interchangeably with “glycosylated” in the literature and in *Diabetes in America, 3rd Edition*, though glycated is considered more correct biochemically.

† International System of Units (SI) values  
Conversion:  $(\% \times 10.93) - 23.50 = \text{mmol/mol}$

SOURCE: Reference 1

**GLUCOSE**

mg/dL	mmol/L*	mg/dL	mmol/L	mg/dL	mmol/L	mg/dL	mmol/L
2	0.11	101	5.61	146	8.10	191	10.60
5	0.28	102	5.66	147	8.16	192	10.66
10	0.56	103	5.72	148	8.21	193	10.71
15	0.83	104	5.77	149	8.27	194	10.77
20	1.11	105	5.83	150	8.33	195	10.82
25	1.39	106	5.88	151	8.38	196	10.88
30	1.67	107	5.94	152	8.44	197	10.93
35	1.94	108	5.99	153	8.49	198	10.99
40	2.22	109	6.05	154	8.55	199	11.04
45	2.50	110	6.11	155	8.60	200	11.10
50	2.78	111	6.16	156	8.66	205	11.38
55	3.05	112	6.22	157	8.71	210	11.66
60	3.33	113	6.27	158	8.77	215	11.93
65	3.61	114	6.33	159	8.82	220	12.21
70	3.89	115	6.38	160	8.88	225	12.49
71	3.94	116	6.44	161	8.94	230	12.77
72	4.00	117	6.49	162	8.99	235	13.04
73	4.05	118	6.55	163	9.05	240	13.32
74	4.11	119	6.60	164	9.10	245	13.60
75	4.16	120	6.66	165	9.16	250	13.88
76	4.22	121	6.72	166	9.21	255	14.15
77	4.27	122	6.77	167	9.27	260	14.43
78	4.33	123	6.83	168	9.32	265	14.71
79	4.38	124	6.88	169	9.38	270	14.99
80	4.44	125	6.94	170	9.44	275	15.26
81	4.50	126	6.99	171	9.49	280	15.54
82	4.55	127	7.05	172	9.55	285	15.82
83	4.61	128	7.10	173	9.60	290	16.10
84	4.66	129	7.16	174	9.66	295	16.37
85	4.72	130	7.22	175	9.71	300	16.65
86	4.77	131	7.27	176	9.77	320	17.76
87	4.83	132	7.33	177	9.82	340	18.87
88	4.88	133	7.38	178	9.88	360	19.98
89	4.94	134	7.44	179	9.93	380	21.09
90	5.00	135	7.49	180	10.00	400	22.20
91	5.05	136	7.55	181	10.05	420	23.31
92	5.11	137	7.60	182	10.10	440	24.42
93	5.16	138	7.66	183	10.16	460	25.53
94	5.22	139	7.71	184	10.21	480	26.64
95	5.27	140	7.77	185	10.27	500	27.75
96	5.33	141	7.83	186	10.32	550	30.53
97	5.38	142	7.88	187	10.38	600	33.30
98	5.44	143	7.94	188	10.43	650	36.10
99	5.49	144	7.99	189	10.49	700	38.85
100	5.55	145	8.05	190	10.55	750	41.63

Conversion: mg/dL x 0.0555 = mmol/L

\* International System of Units (SI) values

SOURCE: Reference 2

**INSULIN**

$\mu\text{IU/mL}$	$\text{pmol/L}^*$	$\mu\text{IU/mL}$	$\text{pmol/L}$	$\mu\text{IU/mL}$	$\text{pmol/L}$	$\mu\text{IU/mL}$	$\text{pmol/L}$
1	6	9	54	17	102	25	150
2	12	10	60	18	108	26	156
3	18	11	66	19	114	27	162
4	24	12	72	20	120	28	168
5	30	13	78	21	126	29	174
6	36	14	84	22	132	30	180
7	42	15	90	23	138		
8	48	16	96	24	144		

Conversion:  $\mu\text{IU/mL} \times 6 = \text{pmol/L}$ 

\* International System of Units (SI) values

SOURCE: Reference 2

**CHOLESTEROL (HDL, LDL, TOTAL)**

$\text{mg/dL}$	$\text{mmol/L}^*$	$\text{mg/dL}$	$\text{mmol/L}$	$\text{mg/dL}$	$\text{mmol/L}$	$\text{mg/dL}$	$\text{mmol/L}$
4.0	0.10	65	1.68	130	3.37	195	5.05
5.0	0.13	70	1.81	135	3.50	200	5.18
10	0.26	75	1.94	140	3.63	210	5.44
15	0.39	80	2.07	145	3.76	220	5.70
20	0.52	85	2.20	150	3.89	230	5.96
25	0.65	90	2.33	155	4.01	240	6.22
30	0.78	95	2.46	160	4.14	250	6.48
35	0.91	100	2.59	165	4.27	260	6.73
40	1.04	105	2.72	170	4.40	270	6.99
45	1.17	110	2.85	175	4.53	280	7.25
50	1.30	115	2.98	180	4.66	290	7.51
55	1.42	120	3.11	185	4.79	300	7.77
60	1.55	125	3.24	190	4.92		

Conversion:  $\text{mg/dL} \times 0.0259 = \text{mmol/L}$ 

\* International System of Units (SI) values

SOURCE: Reference 2

**TRIGLYCERIDES**

$\text{mg/dL}$	$\text{mmol/L}^*$	$\text{mg/dL}$	$\text{mmol/L}$	$\text{mg/dL}$	$\text{mmol/L}$
100	1.13	135	1.53	170	1.92
105	1.19	140	1.58	175	1.98
110	1.24	145	1.64	180	2.03
115	1.30	150	1.70	185	2.09
120	1.36	155	1.75	190	2.15
125	1.41	160	1.81	195	2.20
130	1.47	165	1.86	200	2.26

Conversion:  $\text{mg/dL} \times 0.0113 = \text{mmol/L}$ 

\* International System of Units (SI) values

SOURCE: Reference 2

**C-PEPTIDE**

ng/mL	nmol/L*	ng/mL	nmol/L	ng/mL	nmol/L
0.1	0.03	0.6	0.20	1.5	0.50
0.2	0.07	0.7	0.23	2.0	0.67
0.3	0.10	0.8	0.27	2.5	0.83
0.4	0.13	0.9	0.30	3.0	1.00
0.5	0.17	1.0	0.33	3.5	1.17

Conversion:  $\text{ng/mL} \times 0.333 = \text{nmol/L}$

\* International System of Units (SI) values

SOURCE: Reference 2

**REFERENCES**

1. NGSP: harmonizing hemoglobin A1c testing: convert between NGSP, IFCC and eAG [article online], 2010. Available from <http://www.ngsp.org/convert1.asp>. Accessed 20 September 2016
2. Society for Biomedical Diabetes Research: SI unit conversion calculator [article online], 2015. Available from [http://www.soc-bdr.org/content/rds/authors/unit\\_tables\\_conversions\\_and\\_genetic\\_dictionaries/e5196/index\\_en.html](http://www.soc-bdr.org/content/rds/authors/unit_tables_conversions_and_genetic_dictionaries/e5196/index_en.html). Accessed 20 September 2016