

**Table S1.** Food composition of test foods (grams/100 grams).

Food	Control	Control + L-Carnitine	Control + Carnosine	Control + L-Carnitine and Carnosine
Moisture	6.32	6.47	6.73	6.11
Protein	33.26	33.69	32.75	33.46
Fat	21.18	21.07	19.90	19.23
Atwater Energy <sup>e</sup> (kcal/kg)	4,109	4,102	4,038	
Ash	5.23	5.24	5.04	5.43
Crude fiber	1.30	1.20	1.30	1.30
Calcium	0.90	0.89	0.88	0.95
Phosphorus	0.68	0.62	0.69	0.62
Sodium	0.38	0.37	0.46	0.34
Capric acid [10:0]	0.01	0.02	0.01	0.01
Lauric acid [12:0]	0.02	0.02	0.02	0.02
Myristic acid [14:0]	0.23	0.26	0.22	0.21
Palmitic acid [16:0]	4.22	4.63	4.05	3.90
Palmitoleic acid [16:1]	0.55	0.61	0.52	0.51
Stearic acid [18:0]	1.92	2.12	1.84	1.74
Oleic acid [18:1]	6.89	7.63	6.67	6.34
LA [18:2 (n-6)]	3.66	3.98	3.74	3.55
aLA [18:3 (n-3)]	0.22	0.23	0.22	0.23
ARA [20:4 (n-6)]	0.11	0.11	0.10	0.11
EPA [20:5 (n-3)]	0.10	0.11	0.09	0.09
DHA [22:6 (n-3)]	0.08	0.08	0.07	0.07
Lysine	1.45	1.44	1.29	1.30
Threonine	1.12	1.12	1.11	1.12
Methionine	1.39	1.44	1.38	1.43
Cystine	0.52	0.54	0.53	0.54
Tryptophan	0.32	0.32	0.31	0.32
L-Carnitine (added)	0	0.03	0	0.03
Carnosine (added)	0	0	0.10	0.10

<sup>e</sup> Calculated from analyticals using modified Atwater numbers (kcal/g of 3.5 for protein, 8.5 for fat and 3.5 for nitrogen free extract).