

Supplemental table 1 Buffering score of pH buffer supplements.

Supplement	Quantity (g or mL)	Water content (%)	Initial pH	mmoles HCl(+) or NaOH(-) to pH 4	mmoles HCl(+) or NaOH(-)/ 100g to pH 4	mmoles HCl(+) or NaOH(-)/ 100g dry wt to pH 4
Spirulina	1g	0	8.1	1.0	100.0	100.0
NaHCO ₃	1g	0	8.03	11.0	1,100.0	1,100.0
L-Lysine Free Base (Sigma-Aldrich)	1g	0	9.52	7.0	700.0	700.0
L-Lysine (GNC)	1.52g	0	6.96	1.0	65.8	65.8
Whey protein (O,N.)	10g	0	5.99	6.0	60.0	60.0
L-Lysine monohydrochloride (Sigma-Aldrich)	1g	0	6.99	1.0	100.0	100.0
CaCO ₃ (TUMS)	2.58g	0	7.7	20.0	775.2	775.2
Peptone (Sigma- Aldrich)	10g	0	6.49	11.0	110.0	110.0

Supplemental table 2 pH buffering score of foodstuffs.

Food/ Food group	Quantity (g or mL)	Water content (%)	Initial pH	mmoles HCl(+) or NaOH(-) to pH 4	mmoles HCl(+) or NaOH(-)/ 100g to pH 4	mmoles HCl(+) or NaOH(-)/ 100g dry wt to pH 4	mmoles HCl(+) or NaOH(-)/ serving size to pH 4
Dairy							
Products							
Sour cream	50.8g	80.60	4.4	1.0	1.97	10.15	0.3
Peach yogurt	50g	78.2	4.5	2.0	4.0	18.35	9.8
Swiss cheese	100g	43.67	5.8	33.3	33.3	59.12	9.4
Whole milk	100mL	87.69	6.63	5.5	5.5	44.68	13.1
Low fat milk	100mL	89.92	6.64	8.0	8.0	79.37	18.9
Fruits							
Orange	95g	87.14	3.96	0.0	0.0	0.0	0.0
Apple	80g	85.56	3.85	-1.0	-1.25	-8.66	-1.8
Peach	100g	87.59	3.98	0.0	0.0	0.0	0.0
Black Grapes	138g	81.30	3.97	-1.0	-0.72	-3.88	-0.2
Banana	100g	74.91	4.78	3.33	3.33	13.27	2.7
Watermelon	100mL	91.45	5.41	3.0	3.0	35.09	4.56
Cantaloupe	100mL	90.15	6.71	3.0	3.0	30.46	4.8
Vegetables							
Lettuce	50g	95.64	6.23	2.0	4.0	91.74	0.68
Eggplant	50g	92.41	5.60	1.0	2.0	26.35	0.82
Tomatoes	50g	94.50	4.42	1.0	2.0	36.36	1.24

Green beans	50g	90.32	6.88	2.0	4.0	41.32	2.0
Kidney beans	100g	78.04	5.99	6.0	6.0	27.32	3.0
Garbanzo beans	100g	69.69	6.24	4.0	4.0	13.2	2.0
Carrots	50g	90.35	6.33	2.0	4.0	41.45	2.56
Brussel sprouts	50g	86.00	6.7	3.0	6.0	42.86	2.64
Beets	50g	87.58	6.22	2.0	4.0	32.21	2.72
Rice (white)	50g	68.61	6.75	1.0	2.0	6.37	3.7
Broccoli	50g	89.30	6.97	3.0	6.0	56.07	2.73
Asparagus	50g	93.22	6.79	2.0	4.0	59.0	5.36
Eggs, Meats, Etc.							
Eggs (whole)	55g	75.84	7.31	6.0	10.91	45.15	6.0
Chicken breast	42g	64.90	6.05	5.0	11.9	33.92	14.88
Tuna	42g	59.83	5.92	6.0	14.29	35.56	23.57
Hamburger (fat)	42g	53.91	5.57	7.0	16.67	36.16	52.17
Hamburger (lean)	42g	58.16	5.38	3.0	7.14	17.07	22.35
Breads, cereals, etc.							
White bread	55g	27.81	5.55	2.0	3.64	5.04	2.33
Oatmeal	50g	76.98	6.87	7.0	14.0	60.82	5.6
Cheese pizza	50g	44.16	5.53	6.0	12.0	21.49	14.04

Beverages

White wine	100mL	86.86	3.42	-3.0	-3.0	-22.83	-4.41
Red wine	100mL	86.49	3.62	-1.0	-1.0	-7.40	-1.47
Caffeine-free cola	250mL	89.62	2.82	-2.0	-0.8	-7.71	-2.95
Apple juice	100mL	88.24	3.75	-1.0	-1.0	-8.50	-2.48
Regular cola	222mL	90.31	2.98	-1.0	-0.45	-4.65	-1.66
Regular coffee	10g	0.0	5.48	1.0	10.0	10.0	2.4
Beer	207mL	91.96	4.48	1.0	0.48	6.01	1.71
Arizona fruit punch	250mL	87.97	3.47	-2.0	-0.8	-6.65	-1.82
Hawaiian punch	355mL	87.97	3.11	-4.0	-1.13	-9.37	-2.57
Diet cola	150mL	99.54	3.23	-0.6	-0.4	-86.96	-1.46
Caffeine-free and sugar- free cola	250mL	99.74	3.60	-1.0	-.04	-153.85	-1.46
V8 100% vegetable juice	200mL	93.10	4.45	3.0	1.5	21.74	3.65
