

Supporting Information Table S1. Precursor and product ion m/z and instrument parameter values for carotenoid detection.

Carotenoid	Precursor ion	Product ion	Collision energy (eV)	S-lense voltage (V)	Retention time (min)
β- carotene	537.5	81.1	36	116	13.0
		95	31	116	13.0
Zeaxanthin	569.4	119.0	44	102	1.38
		113.0	32	102	1.38
Canthaxanthin	565.4	105.2	57	110	2.15
		133.2	37	110	2.15
Astaxanthin	597.2	119.1	45	102	1.15
		147.1	30	102	1.15
Fucoxanthin	641.4	109.2	38	124	0.95
		170.8	33	124	0.95