

Supplemental Table 1. Maximum absorbance of UV-vis spectra and LC–MS data in the positive ion mode of compounds identified in small intestine samples of mice at the end of the 16-day dietary supplementation with siphonaxanthin.

Peak number	Compound	Maximum absorbance (nm)	Formula ¹	Retention time (min)	Predicted Ion	Predicted m/z	Observed m/z	Error (ppm)
1	Unidentified	459	C ₄₀ H ₅₂ O ₄ predicted	22	[M+H] ⁺	597.3938	597.3820	-19.75
					[M+H-H ₂ O] ⁺	579.3833	579.3779	-9.32
					[M+H] ⁺	599.4095	599.4002	-15.52
2	Unidentified	452	C ₄₀ H ₅₄ O ₄ predicted	25	[M+H-H ₂ O] ⁺	581.3989	581.3764	-38.70
					[M+H-2H ₂ O] ⁺	563.3884	563.3693	-33.90
					[M+H-H ₂ O] ⁺	581.3989	581.3953	-6.19
3	Unidentified	457	C ₄₀ H ₅₄ O ₄ predicted	28	[M+H-2H ₂ O] ⁺	563.3884	563.3899	2.66
					[M+H-H ₂ O] ⁺	583.4146	583.4070	-13.03
					[M+H-2H ₂ O] ⁺	565.4040	565.4023	-3.01
4	Siphonaxanthin	454	C ₄₀ H ₅₆ O ₄	30	[M+H-3H ₂ O] ⁺	547.3934	547.3920	-2.56

¹ The formulas of peaks 1, 2 and 3 were speculated based on the previous reports of the other carotenoids (such as lutein and zeaxanthin) which have similar structures with siphonaxanthin.