Supplemental Table 1. Carotenoid profile (μg/g) of maize genotypes used in micellarization studies

#	Pedigree	Lutein	Zea[a]	βCX	βC
1	(((DTPYC9-F65-2-3-1-1-B-BxDTPYC9-F65-2-2-1-1-B-B)xDTPYC9-F102-4-5-1-1-B-B-B) -B-B-1-2-B-B)-B-B	8.9	34.9	4.4	1.8
2	(((DTPYC9-F65-2-3-1-1-B-BxDTPYC9-F65-2-2-1-1-B-B)xDTPYC9-F46-1-7-1-1-B-B-B) -B-B-9-1-B-B)-B-B	5.4	6.4	2.3	1.3
3	([[[K64R/G16SR]-39-1/[K64R/G16SR]-20-2]-5-1-2-B*4/CML390]-B-38-1-B-7#/[BETASYN] BC1-1-1-1-#/Car Syn3-FS11-4-3-B)-5-2-1-B-B-B	4.7	16.2	4.7	0.99
4	([[[K64R/G16SR]-39-1/[K64R/G16SR]-20-2]-5-1-2-B*4/CML390]-B-38-1-B-7-#/[BETASYN] BC1-1-1-1-#/CML305)-5-2-1-B-B-B	3.8	13.7	4.6	1.3
5	(KUI car syn-FS17-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-10-1-B	1.4	4.0	1.1	14.3
6	(CML297/CML486)-2-4-1-B-B-B	2.3	10.9	4.9	0.81
7	(CML297/CML486)-4-4-1-B-B-B	5.0	12.1	2.6	0.88
8	(CML300/CML486)-2-5-1-B-B-B	3.5	7.2	4.4	0.73
9	(CML300/CML486)-7-2-1-B-B-B	2.4	7.4	6.8	1.9
10	(CML305/CML486)-5-2-3-B-B-B	5.6	5.6	4.7	0.87
11	(CML305/CML486)-8-1-1-B-B-B	2.7	9.1	6.1	2.2
12	(Florida A plus Syn-FS2-2-1-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-B-B-B	15.7	23.8	3.0	4.0
13	(Florida A plus Syn-FS2-2-1-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-5(MAS:L4H1)-1-1-B	9.7	25.1	5.3	2.1
14	(Florida A plus Syn-FS2-2-1-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-5(MAS:L4H1)-5-1-B	10.3	19.7	3.9	3.6
15	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-1-B-B	1.4	4.7	0.58	13.0
16	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-2-B-B	1.9	5.0	0.53	10.8
17	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-1-1-B	0.71	1.0	0.27	12.6
18	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-2-1-B	0.89	2.4	0.45	9.5
19	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-3-1-B	1.4	1.0	0.32	15.0
20	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-4-1-B	1.1	0.74	0.28	10.2
21	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-5-B-B	1.0	0.58	0.33	15.8
22	(KUI car syn-FS11-1-1-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-6-1-B	1.3	1.5	0.37	10.6
23	(KUI car syn-FS17-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-1-1-B	1.2	6.0	0.86	11.5
24	(KUI car syn-FS17-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-8-1-B	2.1	5.1	0.77	13.5
25	(KUI car syn-FS17-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-9-1-B	1.6	6.7	0.92	10.5
26	(KUI car syn-FS25-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-1(MAS:L4H1)-1-B-B	2.4	4.0	0.49	8.1
27	(KUI car syn-FS25-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-2(MAS:L4H1)-1-B-B	3.0	5.0	0.49	11.4
28	(KUI car syn-FS25-3-2-B-B-B/(KU1409/DE3/KU1409)S2-18-2-B)-B-3(MAS:L4H1)-1-B-B	10.6	35.6	7.6	3.1
29	(MAS[MSR/312]-117-2-2-1-B-B-B/[BETASYN]BC1-4-2-1/KUISYN#-B)-B-2-2-B-B-B	7.6	22.8	3.0	5.5
30	[DTPYC9-F65-2-3-1-1-B-B x DTPYC9-F65-2-2-1-1-B-B]-3-4-2-B-B-B-B-B-B-B	10.7	15.4	6.7	3.4
31	[DTPYC9-F74-1-1-1-1-B-B x DTPYC9-F65-2-2-1-1-B-B]-B-3-4-B-B-B-B-B-B-B	15.1	3.2	2.0	3.9
32	Ac8730SR-##-124-1-5-B-1-#/[BETASYN]BC1-16-2-3-1-2-B-B-B-B-B-B	1.7	4.0	0.85	1.1

33	CML297//[CML197/N3//CML206]-X-32-1-4-B*5/[BETASYN]BC1-4-4-4-1-B-B-B-B-B-B-B	5.0	12.9	5.8	2.1
34	CML489/[BETASYN]BC1-5-2-1-B-B-B-B-B-B-B	8.9	23.6	2.0	3.5
35	CML496-B-B-B	4.3	15.1	5.2	1.5
36	KUI car syn-FS17-3-2-B-B-B-B-B-B-B-B	5.0	41.6	6.9	2.3
37	KUI car syn-FS25-3-2-B-B-B-B-B-B-B-B	3.2	39.5	4.6	2.5
38	MAS[206/312]-23-2-1-1-B-B-B/[BETASYN]BC1-4-1-1-1-B-B-B-B-B-B-B-B	1.2	5.5	0.95	2.1
39	MAS[206/312]-23-2-1-1-B-B-B/[BETASYN]BC1-6-1-2-1-7-B-B-B-B-B-B	1.8	4.9	1.2	2.4
40	MAS[206/312]-23-2-1-1-B-B-B/[BETASYN]BC1-9-3-1-1-2-B-B-B-B-B-B	1.9	4.7	1.2	2.9
41	MAS[MSR/312]-117-2-2-1-B-B-B/[BETASYN]BC1-11-5-2-1-3-B-B-B-B-B-B	4.2	4.6	3.4	1.5
42	OBATANPA-SRc1F3(balbulk1)-#bal/[BETASYN]BC1-54-1-2-B-B-B-B-B-B-B-B-B	3.2	16.6	6.6	1.5
43	CML297-B	2.5	9.5	7.8	2.2
44	CML305-B	2.1	8.5	5.2	1.5

[a] Abbreviations: Zea, zeaxanthin; βCX, β-cryptoxanthin; βC, β-carotene.