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Supplemental Tables

Supplemental Table 1. Proximate compositions of CC in different regions.

No.	Region	Moisture	Fat	Proteins	Carbohydrates	Ash	Energy	References
1	Bulgaria	89.59 ± 0.06[a]	3.48 ± 0.10[b]	22.95 ± 0.27[b]	65.73 ± 0.29[b]	7.84 ± 0.10[b]	390.90 ± 0.67[c]	21
2	Romania	2.17 ± 0.02[b]	2.17 ± 0.04[b]	21.03 ± 0.04[b]	65.06 ± 0.11[b]	9.57 ± 0.08[b]	363.90 ± 0.66[c]	36
3	Croatia	85.76 ± 0.79[a]	1.90 ± 0.61[b]	30.91 ± 0.28[b]	52.50 ± 0.24[b]	8.80 ± 0.05[b]	355.55 ± 0.07[c]	43
4	/	/	4.49 ± 0.06[b]	69.14 ± 3.26[b]	14.25 ± 3.96[b]	12.12 ± 0.26[b]	375.76 ± 5.40[c]	42
5	Portugal	92.38 ± 0.31[a]	0.22 ± 0.04 [a]	4.09 ± 0.09[a]	2.44 ± 0.33[a]	0.88 ± 0.05[a]	28.18 ± 1.39 [d]	45
6	Greece	82.57 ± 0.69[a]	2.88 ± 0.02[b]	21.57 ± 0.21[b]	66.07 ± 0.23[b]	9.44 ± 0.01[b]	/	195
7	Tunisia	88.82 ± 0.29[a]	2.82 ± 0.00[b]	12.37 ± 0.01[b]	72.24 ± 0.03[b]	12.57 ± 0.02[b]	368.55 ± 0.07[c]	39
8	China	/	5.41 ± 0.01[b]	23.24 ± 0.17[b]	52.61 ± 0.27[b]	12.71 ± 0.01[b]	376.21 ± 0.21[c]	23
9	China	90.36 ± 0.82[a]	2.12 ±0.14[b]	21.82 ± 0.21[b]	37.72 ± 0.28[b]	3.54 ± 0.34[b]	/	41

[a]g/100 g fw; [b]g/100 g dw; [c]kcal/100 g dw; [d]kcal/100 g fw.
"/": Data are absent from the literature.

Supplemental Table 2. Amino acids content of CC in different regions.

No.	Region	Asp[a,c]	Ser[a,e]	Glu[a,c]	Gly[a,e]	Ala[a,e]	Tyr[a,d]	His[a,d]	Arg[a,d]	Pro[a,f]	Asn[a,f]	Gln[a,f]	Cys[a,f]
1	China	1.09	0.65	1.65	0.53	0.68	0.33	0.62	1.01	0.52	/	/	0.14
2	Croatia	0.06 ± 0.17	0.18 ± 0.08	29.99 ± 0.13	0.13 ± 0.07	4.98 ± 0.25	n.d.	3.15 ± 0.19	0.44 ± 0.14	/	/	/	1.99 ± 0.16
3	China	17.59	9.42	29.46	7.34	8.49	5.00	6.14	10.01	16.54	/	/	1.92
4	Tunisia	2.30 ± 0.31	2.78 ± 0.12	2.00 ± 0.11	/	1.81 ± 0.45	0.78 ± 0.19	/	/	/	/	/	1.39 ± 0.26
5	Tanzanian	n.d.	n.d.	26.80	1.16	33.20	n.d.	/	n.d.	/	n.d.	n.d.	/
6	Portugal	n.d.	253.80 ± 1.00	888.20 ± 4.50	404.30 ± 1.50	1356.00 ± 8.70	301.30	341.00 ± 0.20	95.20	253.80 ± 0.10	222.00 ± 0.20	1863.60 ± 21.30	190.30 ± 1.20
7	Finland	1.29 ± 0.08	0.53 ± 0.03	3.78 ± 0.24	0.21 ± 0.02	0.65 ± 0.02	0.43 ± 0.03	1.13 ± 0.08	4.47 ± 0.46	n.d.	0.29 ± 0.02	4.74 ± 0.39	n.d.
8	Finland	9.70 ± 0.50	4.30 ± 0.30	31.00 ± 3.10	1.50 ± 0.10	11.30 ± 0.90	4.80 ± 0.10	9.60 ± 0.30	40.00 ± 5.30	n.d.	1.70 ± 0.40	26.20 ± 1.70	n.d.

Met[b,d]	Thr[b,e]	Ile[b,d]	Leu[b,d]	Phe[b,d]	Lys[b,f]	Val[b,d]	Trp[b,d]	Total AA	units	References
0.11	0.62	0.55	0.89	0.50	0.70	0.59	n.d.	11.19	(mg/g dw)	[41]
0.41 ± 0.03	8.98 ± 0.16	n.d.	0.21 ± 0.04	0.06 ± 0.08	5.74 ± 0.27	1.34 ± 0.36	0.02 ± 0.19	57.68 ± 0.11	(mg/g dw)	[43]
4.04	9.36	6.79	12.91	10.30	9.51	8.86	1.60	175.28	(mg/g dw)	[23]
1.00 ± 0.19	1.08 ± 0.29	0.96 ± 0.11	3.02 ± 0.15	2.98 ± 0.45	1.93 ± 0.17	n.d.	/	22.03 ± 0.40	(mg/g dw)	[39]
9.19	7.99	/	n.d.	n.d.	n.d.	6.11	10.50	/	(% dw)	[196]
/	182.40 ± 0.50	95.20	142.70 ± 0.10	95.20 ± 0.40	364.80 ± 0.30	n.d.	150.70 ± 0.10	/	(mg/kg dw)	[197]
0.14 ± 0.00	0.47 ± 0.02	0.23 ± 0.01	0.46 ± 0.02	0.25 ± 0.01	1.00 ± 0.10	0.31 ± 0.02	0.32 ± 0.04	/	(mg/g dw)	[95]
n.d.	3.20 ± 0.10	1.40 ± 0.10	5.90 ± 0.30	2.40 ± 0.20	7.40 ± 0.90	13.70 ± 0.50	n.d.	174.00	(mg/100 g fw)	[94]

[a]Non-essential amino acids; [b]Essential amino acids; [c]MSG-like amino acids; [d]Bitter amino acids; [e]Sweet amino acids; [f]Tasteless or no reported taste property amino acids.

"n.d.": Not detected. "/": Data are absent from the literature.

Supplemental Table 3. Free sugar content of CC in different regions (g/100 g dw).

No.	Region	*D*-Galacturonic acid[a]	Fucose[a]	Arabinos[a]	Glucose[a]	Mannitol[a]	Mannose[a]	Xylose[a]	Fructose[a]	Maltose[b]	Trehalose[b]	Total	Units	References
1	Tunisia	/	/	/	0.770 ± 0.009	2.570 ± 0.001	/	/	/	/	12.010 ± 0.091	15.350 ± 0.073	(g/100 g dw)	[39]
2	Croatia	/	/	/	7.980 ± 0.130	8.560 ± 0.020	28.560 ± 0.020	/	/	/	6.680 ± 0.090	48.780 ± 0.120	(g/100 g dw)	[43]
3	/	/	/	/	/	8.330 ± 0.090	/	/	/	n.d.	6.120 ± 0.100	14.450 ± 0.190	(g/100 g dw)	[42]
4	China	0.003	0.010	0.001	0.222	n.d.	0.040	0.004	0.00	0.003	0.043	/	(g/100 g dw)	[23]
5	Portugal	/	/	/	/	1.060 ± 0.020	/	/	/	n.d.	0.850 ± 0.010	1.910 ± 0.030	(g/100 g fw)	[45]

[a]Monosaccharide; [b]Disaccharide**.**

"n.d.": Not detected.

"/": Data are absent from the literature.

Supplemental Table 4. Fatty acids content of CC in different regions.

No.	Region	C4:0	C6:0	C8:0	C10:0	C11:0	C12:0	C13:0	C14:0	C15:0	C16:0	C17:0	C18:0	C20:0	C21:0	C22:0	C23:0	C24:0	C14:1	C15:1	C16:1	C17:1	C18:1	C18:1n9
1	China	/	/	n.d.	/	/	0.11	/	1.21	2.64	2.90	0.31	6.56	1.70	0.30	1.85	0.93	2.52	/	/	1.71	/	9.61	/
2	India	6.60							8.00	0.10	18.30	n.d.	6.00	n.d.	/	n.d.	/	n.d.	8.30	/	n.d.	/	n.d.	35.40
3	/	/	0.67 ± 0.05	0.04 ± 0.00	0.01 ± 0.00	/	0.03 ± 0.00	/	0.13 ± 0.00	0.31 ± 0.02	13.08 ± 0.14	0.19 ± 0.01	6.49 ± 0.11	0.31 ± 0.02	0.23 ± 0.02	0.38 ± 0.03	0.11 ± 0.01	0.88 ± 0.06	/	/	0.49 ± 0.03	/	/	10.78 ± 0.34
4	Bulgaria	/	/	/	n.d.	/	0.10 ± 0.03	0.10 ± 0.02	n.d.	0.50 ± 0.10	27.30 ± 0.30	0.40 ± 0.10	10.50 ± 0.50	0.40 ± 0.10	/	0.20 ± 0.05	/	/	/	/	1.20 ± 0.20	n.d.	31.70 ± 0.60	/
5	Portugal	/	0.06 ± 0.01	0.10 ± 0.00	0.05 ± 0.00	/	0.02 ± 0.00	/	0.09 ± 0.00	0.14 ± 0.00	7.19 ± 0.14	0.09 ± 0.00	3.34 ± 0.01	0.18 ± 0.00	0.12 ± 0.01	0.23 ± 0.01	0.06 ± 0.00	0.51 ± 0.02	/	/	0.20 ± 0.00	/	/	8.13 ± 0.01
6	Turkey	/	/	/	/	/	/	/	0.67	1.74	14.86	n.d.	11.86	/	/	n.d.	/	n.d.	/	/	2.54	/	28.62	/
7	Portugal	/	n.d.	n.d.	n.d.	n.d.	0.06 ± 0.00	n.d.	2.32 ± 0.25	0.52 ± 0.05	15.66 ± 0.12	0.50 ± 0.00	7. 02 ± 0.13	n.d.	n.d.	0.32 ± 0.02	0.06 ± 0.00	0.50 ± 0.00	n.d.	/	0.32 ± 0.02	n.d.	148.17 ± 2.32	/
8	Turkey	0.20	0.06	0.15	0.49	0.04	0.09	0.03	0.46	0.41	17.05	0.15	5.56	0.29	0.03	0.25	n.d.	0.81	0.03	0.38	0.57	0.08	21.12	/
9	China	/	0.39 ± 0.10	1.03 ± 0.12	0.15 ± 0.05	2.11 ± 0.13	1.19 ± 0.16	0.52 ± 0.27	9.23 ± 2.11	17.47 ± 2.36	1,445.90 ± 82.38	23.24 ± 3.25	661.19 ± 53.12	34.06 ± 2.88	2.35 ± 0.07	26.78 ± 1.86	4.34 ± 0.51	76.71 ± 7.42	0.23 ± 0.05	/	37.27 ± 6.13	6.99 ± 0.66	2,432.80 ± 46.44	/
10	Poland	/	/	/	/	/	0.12 ± 0.08	/	0.16 ± 0.03	0.17 ± 0.03	12.49 ± 1.53	0.12 ± 0.02	3.56 ± 0.19	0.70 ± 0.27	/	0.42 ± 0.46	/	/	/	/	0.39 ± 0.06	n.d.	/	6.76 ± 0.60

C18:1n11	C18:2	C18:2n6	C18:3	C18:3n3	C18:3n6	C20:1	C20:2	C20:3n3	C20:3n6	C20:4	C20:4n6	C20:5	C20:5n3	C22:1	C22:2	C22:6	C24:1	Total	SFA	MUFA	PUFA	Units	References
/	5.75	/	/	5.73	1.24	/	2.46	/	/	/	/	/	/	/	/	/	/	47.52	21.02	11.32	15.18	mg/g dw	23
/	17.30	/	n.d.	/	/	/	/	/	/	/	/	/	/	/	/	/	n.d.	/	39.00	43.70	17.30	%	198
/	/	53.59 ± 0.12	/	0.08 ± 0.01	/	11.48 ± 0.02	0.17 ± 0.00	/	/	/	/	/	/	/	/	/	0.55 ± 0.04	/	22.63 ± 0.24	23.29 ± 0.25	54.08 ± 0.01	%	42
/	25.20 ± 0.20	/	0.60 ± 0.10	/	/	/	0.20 ± 0.05	/	/	1.60 ± 0.20	/	/	/	/	/	/	/	/	/	/	/	%	21
/	/	50.01 ± 0.09	/	0.10 ± 0.00	/	27.98 ± 0.20	0.13 ± 0.01	/	n.d.	/	/	/	0.09 ± 0.00	/	/	/	1.23 ± 0.04	/	12.04 ± 0.52	37.54 ± 0.14	50.42 ± 0.65	%	45
/	38.64	/	/	/	/	1.17	/	/	/	/	/	/	/	/	n.d.	/	n.d.	/	29.13	32.33	38.54	%	49
/	654.71 ± 3.47	/	/	n.d.	n.d.	n.d.	0.09 ± 0.00	/	0.09 ± 0.00	/	0.09 ± 0.01	/	n.d.	/	/	/	n.d.	830.62 ± 43.53	26.95 ± 10.46	148.49 ± 10.29	655.18 ± 34.93	mg/kg dw	47
/	49.62	/	0.02	/	/	0.22	0.14	n.d.	0.03	0.07	/	0.26	/	0.37	0.25	0.45	n.d.	/	26.03	22.85	51.22	%	48
/	5,279.02 ± 160.31	/	25.05 ± 3.31	/	/	50.27 ± 6.38	36.05 ± 4.36	7.75 ± 0.27	1.10 ± 0.18	14.45 ± 10.12	/	4.10 ± 0.87	/	7.20 ± 0.71	6.58 ± 1.31	5.69 ± 0.19	16.60 ± 1.36	10,237.81 ± 403.48	2,306.65 ± 151.30	5,379.80 ± 183.28	2,551.36 ± 47.98	mg/kg dw	199
20.57 ± 1.69	53.94 ± 2.30	/	0.11 ± 0.03	/	/	0.06 ± 0.03	0.40 ± 0.12	/	/	/	/	/	/	/	/	/	/	/	17.75 ± 2.11	27.79 ± 1.91	54.46 ± 2.28	%	165

"n.d.": Not detected.

"/": Data are absent from the literature.

Supplemental Table 5. Mineral content of CC in different regions (mg/kg dw).

No.	Regions	Ca[a]	K[a]	Na[a]	P[a]	Mg[a]	Cu[b]	Fe[b]	Mn[b]	Zn[b]	Ni[b]	Co[b]	Se[b]	Cr[b]	References
1	Poland	211.00 ± 73.20	46,024.00 ± 4492.00	142.00 ± 19.20	/	84200.00 ± 54.20	48.40 ± 4.20	58.90 ± 5.28	23.70 ± 3.25	113.00 ± 9.50	/	/	/	/	56
2	China	2068.31 ± 311.04	25861.50 ± 1571.90	288.79 ± 37.32	/	1243.80 ± 233.56	51.66 ± 0.08	351.15 ± 0.64	25.29 ± 0.93	81.95 ± 13.43	/	/	/	/	23
3	Bulgaria	459.59 ± 17.35	31308.13 ± 1185.24	139.43 ± 5.02	2713.62 ± 168.84	626.06 ± 65.29	27.57 ± 4.96	82.29 ± 6.75	18.32 ± 4.24	78.83 ± 3.86	0.33 ± 0.16	1.48 ± 0.14	/	/	21
4	Greece	/	/	/	/	866.30 ± 11.90	32.49 ± 0.30	118.20 ± 2.24	22.09 ± 0.54	54.29 ± 1.23	1.07 ± 0.03	0.05 ± 0.01	/	1.57 ± 0.04	183
5	Bosnia and Herzegovina	266.30 ± 0.05	28375.40 ± 4.35	53.10 ± 0.01	3794.00 ± 0.05	586.60 ± 0.20	26.74 ± 0.01	138.99 ± 0.02	11.79 ± 0.01	57.02 ± 0.01	0.92 ± 0.01	0.30 ± 0.01	0.45 ± 0.01	0.45 ± 0.01	119
6	Poland	747.00 ± 251.00	42000.00 ± 8000.00	158.00 ± 78.00	/	950.00 ± 130.00	49.10 ± 10.00	218.00 ± 112.00	35.30 ± 14.30	100.00 ± 17.00	1.01 ± 1.51	/	/	/	55
7	Romania	1100.00 ± 3.00	/	/	/	710.00 ± 4.00	64.10 ± 0.70	178.00 ± 0.00	26.80 ± 0.40	188.00 ± 1.00	3.48 ± 0.13	0.19 ± 0.01	0.17 ± 0.01	/	57
8	Bulgaria	459.59 ± 17.35	31308.13 ± 1185.24	139.43 ± 5.02	2713.62 ± 168.84	626.06 ± 65.29	/	/	/	/		/	/	/	200

[a]Macrominerals; [b]Trace Minerals.

"n.d.": Not detected.

"/": Data are absent from the literature.

Supplemental Table 6. Vitamin content of CC in different regions.

		Dry Weight		References	Fresh Weight		References
Vitamin B_9 (Folate)		/	/	/	1.98-2.46	ug/100 g fw	[64]
Vitamin B_{12} (Cobalamin)		1.09 ± 0.27-1.82 ± 0.57	mg/100 g dw	[65]	/	/	/
Vitamin C (*L*-Ascorbic Acid)		0.86 ± 0.01	mg/g dw	[42]	0.40 ± 0.02	mg/g fw	[45]
Vitamin D_2 (Ergocalciferol)		0.12-6.30	ug/g dw	[61]	10.70	ug/100 g fw	[62]
Vitamin E	*α*-tocopherol	0.12 ± 0.00	ug/g dw	[42]	13.40 ± 0.76	ng/g fw	[45]
	β-tocopherol	0.03 ± 0.01	ug/g dw	[42]	2.87 ± 0.06	ng/g fw	[45]
	γ-tocopherol	0.03 ± 0.01	ug/g dw	[42]	n.d.	ng/g fw	[45]

"n.d.": Not detected.
"/": Data are absent from the literature.

Supplemental Table 7. Flavor 5’-nucleotides content of CC in different regions.

No.	Regions	5′-GMP	5′-IMP	5′-XMP	Total Flavor 5’-Nucleotides	Units	References
1	Croatia	0.21 ± 0.07	0.03 ± 0.12	0.14 ± 0.07	0.38	mg/g dw	[43]
2	Finland	0.19 ± 0.03	0.22 ± 0.01	/	0.41	mg/g dw	[95]
3	China	0.29	0.19	0.96	1.44	mg/g dw	[23]
4	Finland	2.50 ± 0.60	n.d.	/	2.50	mg/100 g fw	[94]
5	China	0.60 ± 0.07	0.88 ± 0.05	/	1.48	mg/g dw	[97]

“/”: Data are absent from the literature.

5’-GMP: 5’-Guanosine monophosphate; 5’-IMP: 5’-Inosine monophosphate; 5”-XMP: 5’-Xanthosine monophosphate.

195. P. K. Ouzouni, D. Petridis, W.-D. Koller and K. A. Riganakos, Nutritional value and metal content of wild edible mushrooms collected from west Macedonia and Epirus, Greece, *Food Chem.*, 2009, **115**, 1575-1580.
196. S. J. Mdachi, M. H. Nkunya, V. A. Nyigo and I. T. Urasa, Amino acid composition of some Tanzanian wild mushrooms, *Food Chem.*, 2004, **86**, 179-182.
197. B. Ribeiro, P. B. Andrade, B. M. Silva, P. Baptista, R. M. Seabra and P. Valentão, Comparative study on free amino acid composition of wild edible mushroom species, *J. Agric. Food Chem.*, 2008, **56**, 10973-10979.
198. S. Kavishree, J. Hemavathy, B. Lokesh, M. Shashirekha and S. Rajarathnam, Fat and fatty acids of Indian edible mushrooms, *Food Chem.*, 2008, **106**, 597-602.
199. W. Xun, G. Wang, Y. Zhang, C. Ge and G. Liao, Characterisation of LC-MS-based low molecular weight compounds and fatty acids of four wild edible mushrooms, *Int. Food Res. J.*, 2021, **28**, 1009-1019.
200. M. Ivanova, L. Dospatliev and P. Papazov, Application of ICP-OES method of determination of K, P, Mg, Na and Ca in nine wild edible mushrooms with a chemometric approach, *C. R. Acad. Bulg. Sci.*, 2019, **72**, 182-190.