

Table S1. F values from ANOVA based on linear mixed-effects models for total chlorophyll (Chl) and each carotenoid components per unit needle dry weight in *Cryptomeria japonica* from five provenances (Prv) cultivated in two common gardens (CG).

Season	Source of variation	numDF	Chl	VAZ	Rho	Neo	Lut	α -Car	β -Car
Summer	Prv	4	0.95 ^{ns}	0.24 ^{ns}	—	1.86 ^{ns}	1.64 ^{ns}	0.91 ^{ns}	2.14 ^{ns}
	CG	1	36.17 ^{***}	10.40 ^{**}	—	58.73 ^{***}	0.13 ^{ns}	93.65 ^{***}	2.39 ^{ns}
	Prv×CG	4	1.78 ^{ns}	1.02 ^{ns}	—	2.94 [*]	1.37 ^{ns}	0.70 ^{ns}	0.67 ^{ns}
Winter	Prv	4	2.92 [*]	2.88 ^m	1.57 ^{ns}	1.58 ^{ns}	4.19 [*]	1.86 ^{ns}	2.73 [*]
	CG	1	39.74 ^{***}	634.34 ^{***}	63.84 ^{***}	106.46 ^{***}	83.01 ^{***}	58.73 ^{***}	16.94 ^{***}
	Prv×CG	4	0.34 ^{ns}	5.71 ^{***}	2.81 ^{**}	1.16 ^{ns}	3.17 [*]	2.94 [*]	1.20 ^{ns}

VAZ: xanthophyll cycle, Rho: rhodoxanthin, Neo: neoxanthin, Lut: lutein, α -Car: α -carotene, β -Car: β -carotene. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, ^{ns} not significant