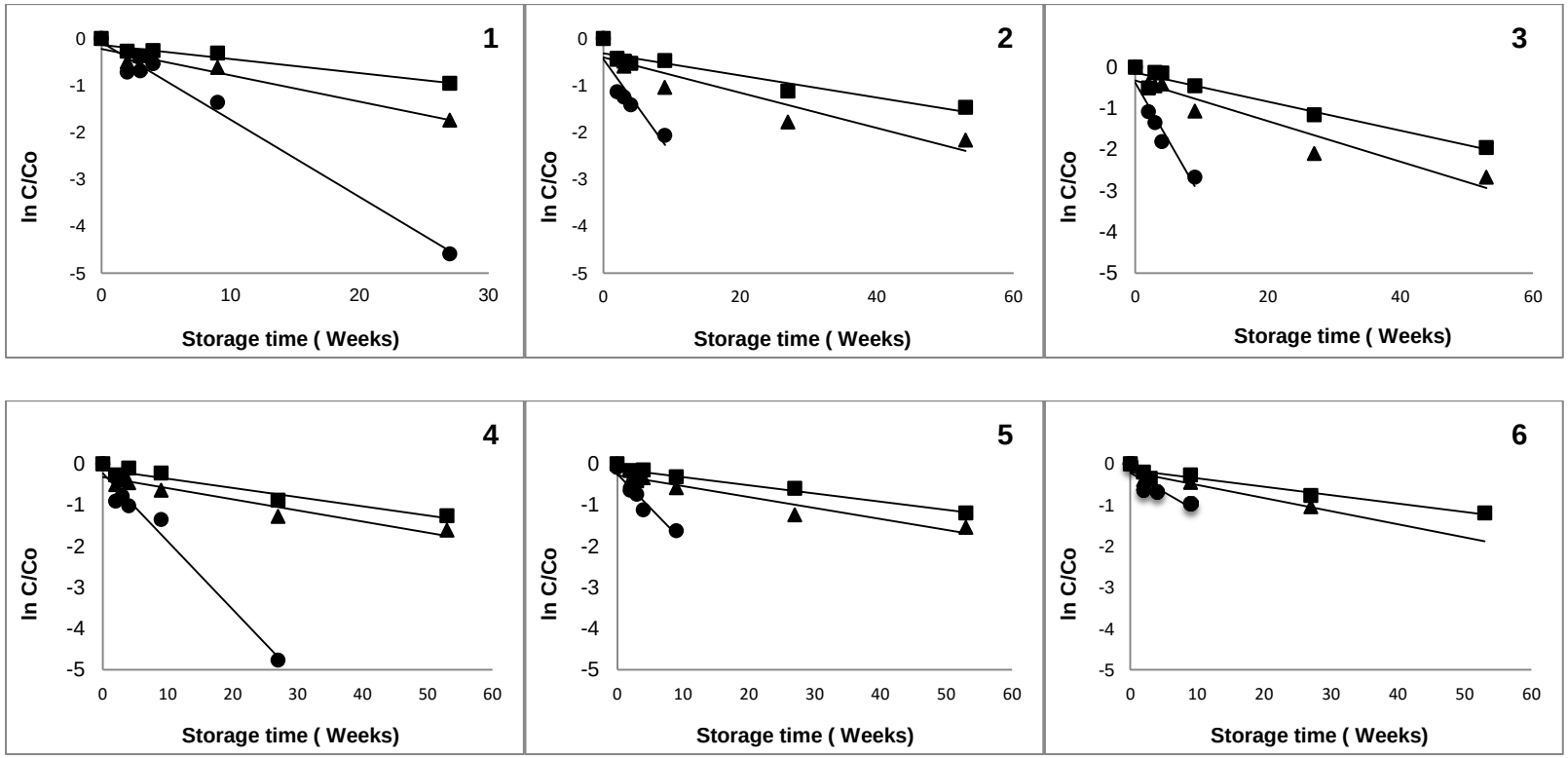
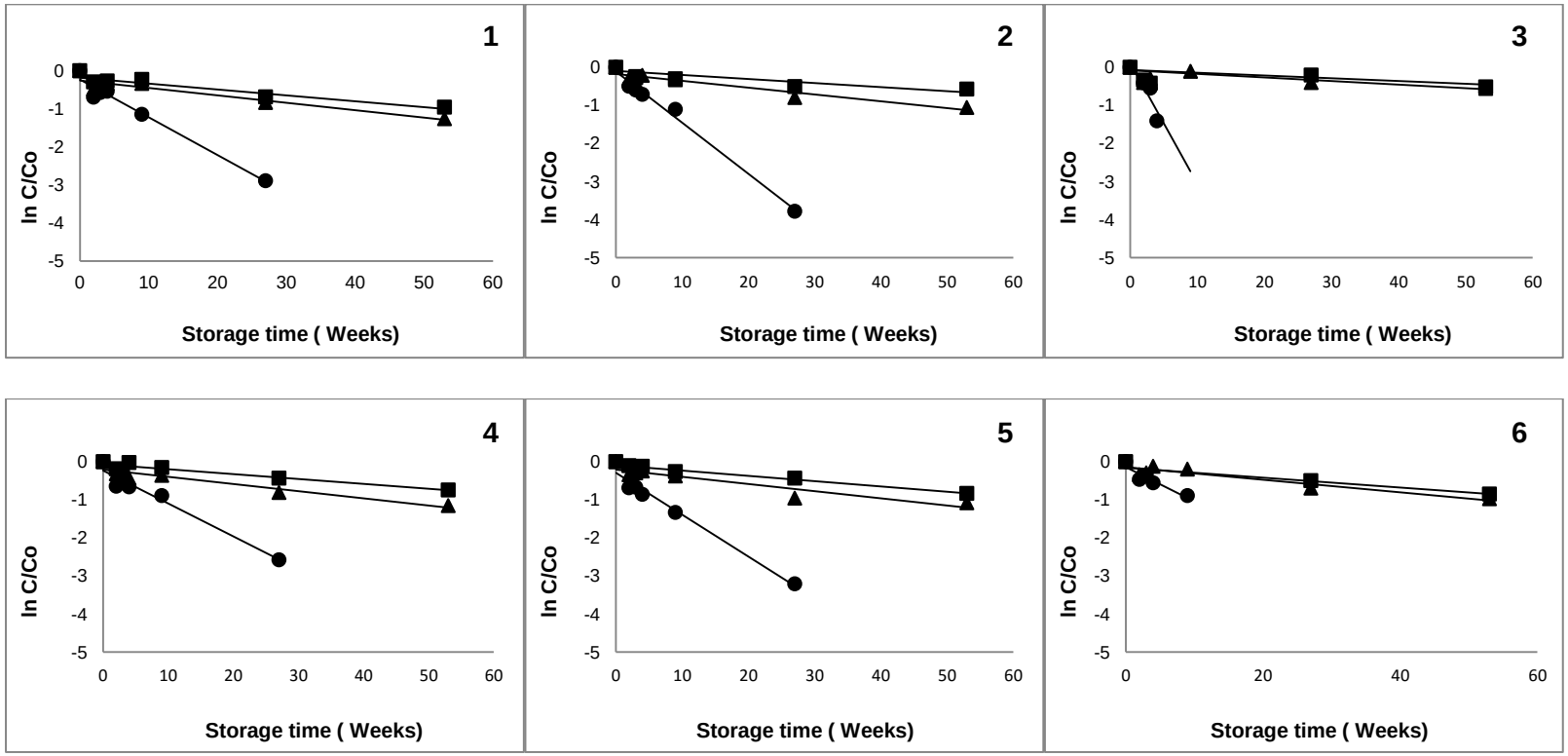
Figure S1. Apparent first-order degradation of carotenoids in biofortified maize kernels for 6 genotypes stored under various temperatures: (**A**) all-β-carotene; (**B**) β-cryptoxanthin; (**C**) provitamin A carotenoids; (**D)** total carotenoid content. Number in the upper right of each graph represent the genotype according to table 1. (□) 4 °C, 63.5% RH ± 0.72; (▲) 22.5 °C, 59.14% RH ± 0.44; (●) 55 °C, 50.15% RH ± 0.65

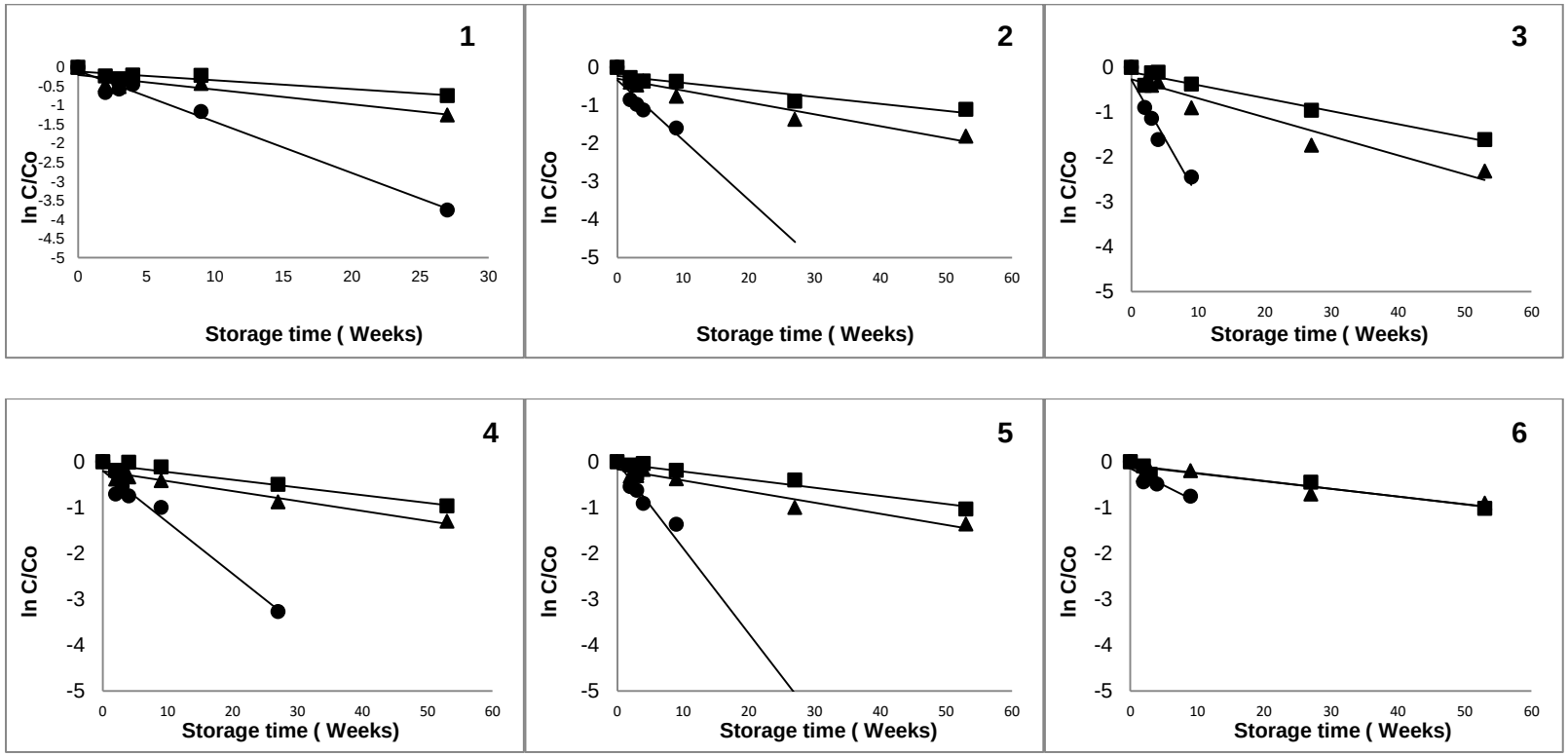
A



B



C



D

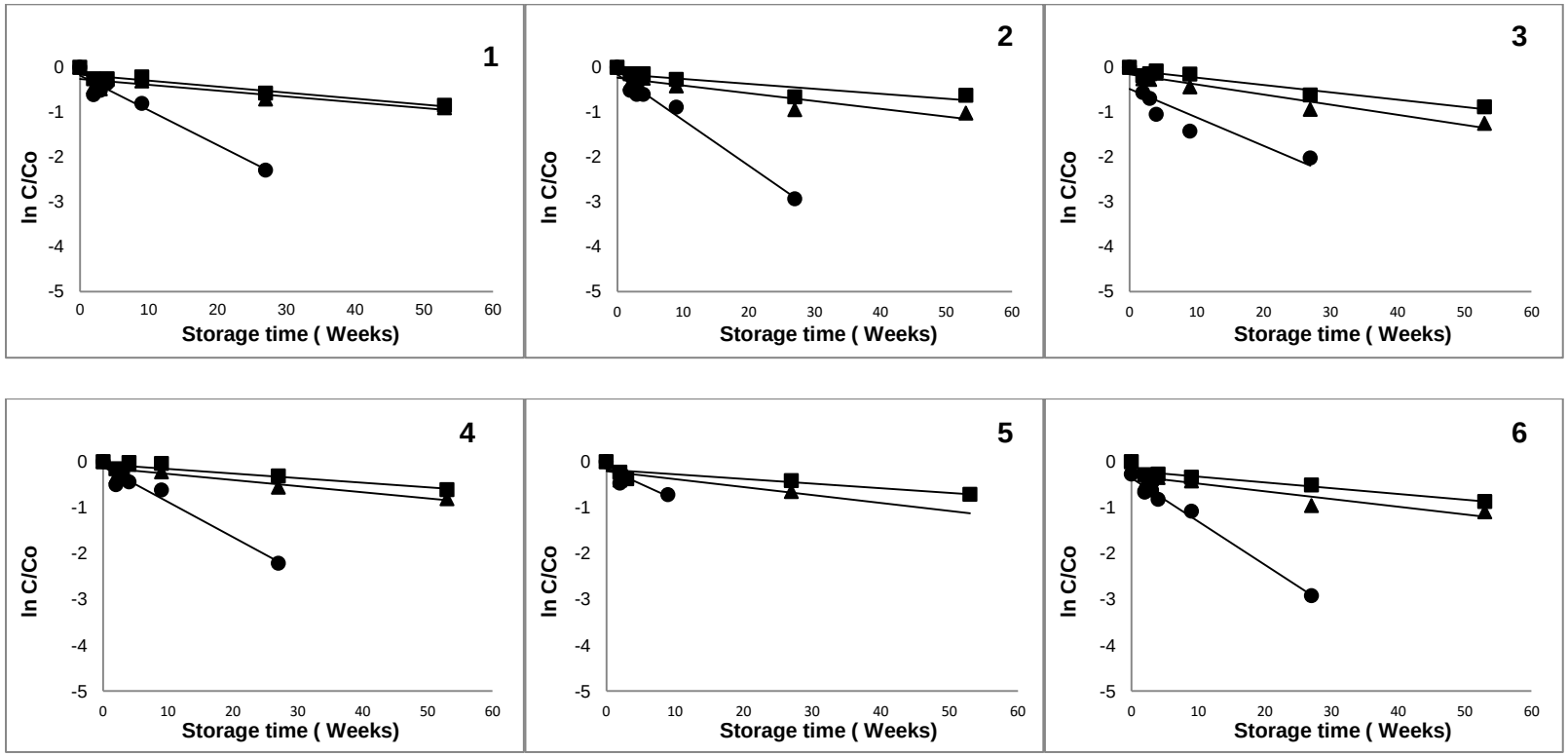
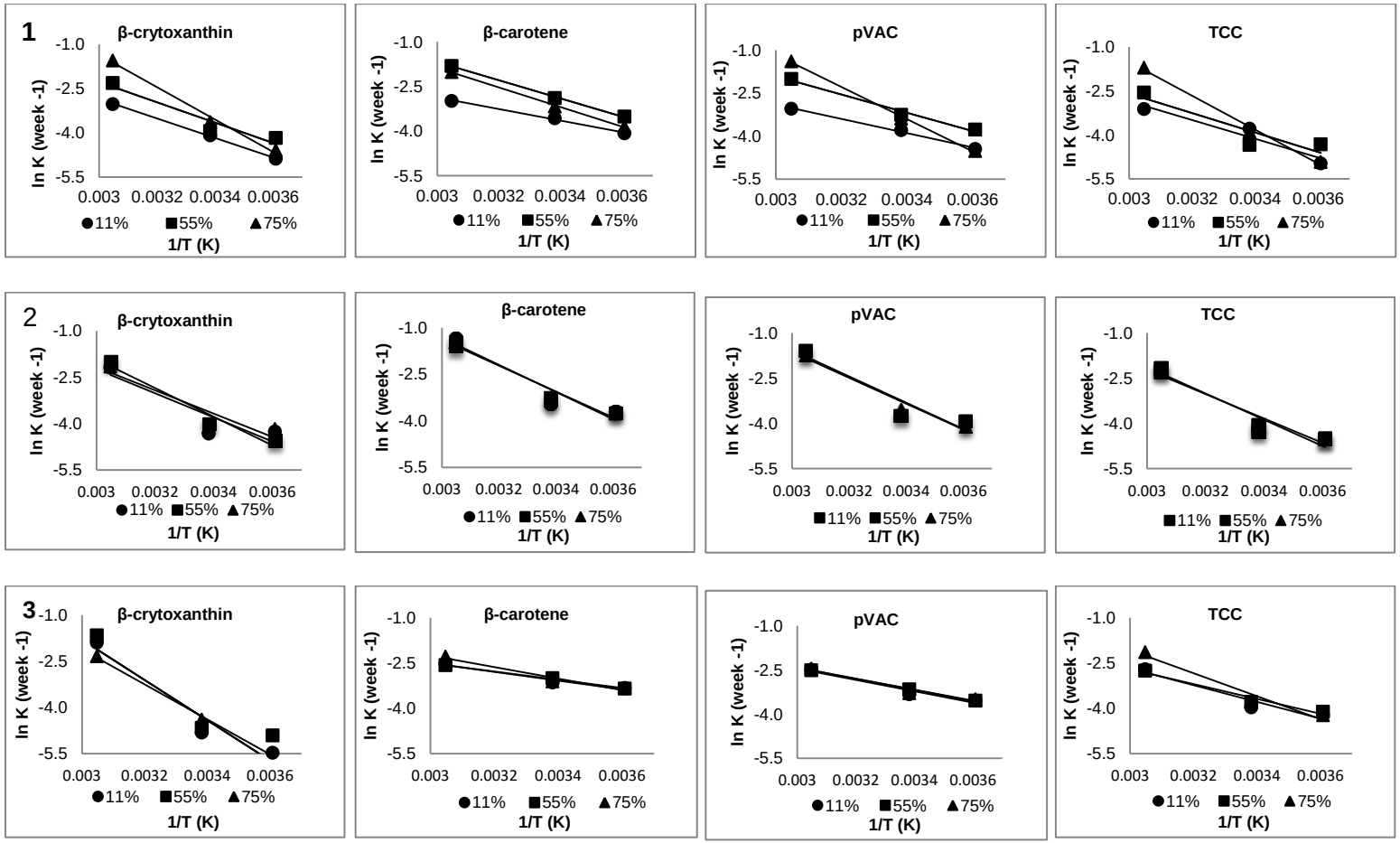


Figure S2. Arrhenius plot of rate constants of β-crytoxanthin, β-carotene, pVAC and TCC in 6 biofortified maize genotypes. Number in the upper left of each graph represent the genotype according to table 1.



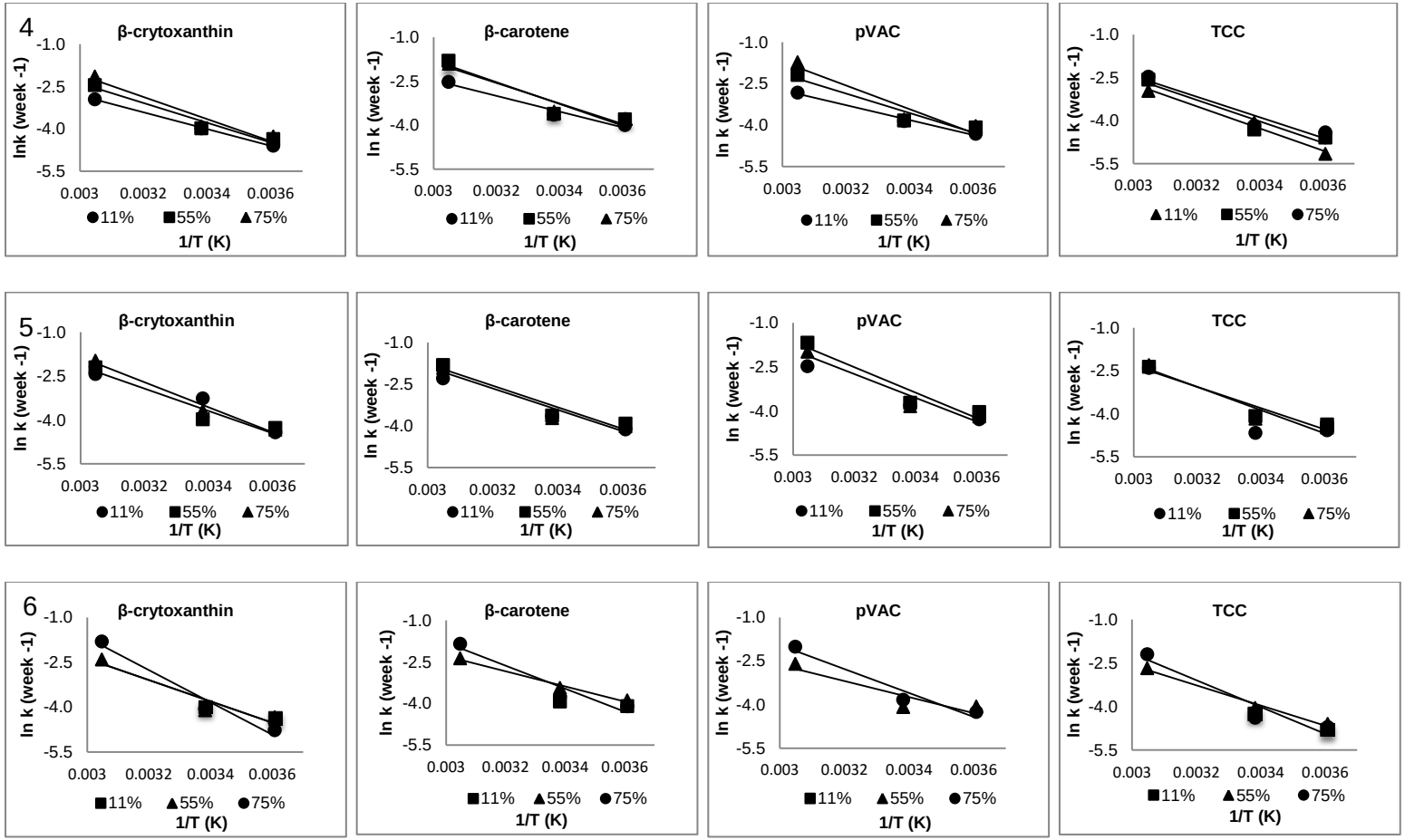
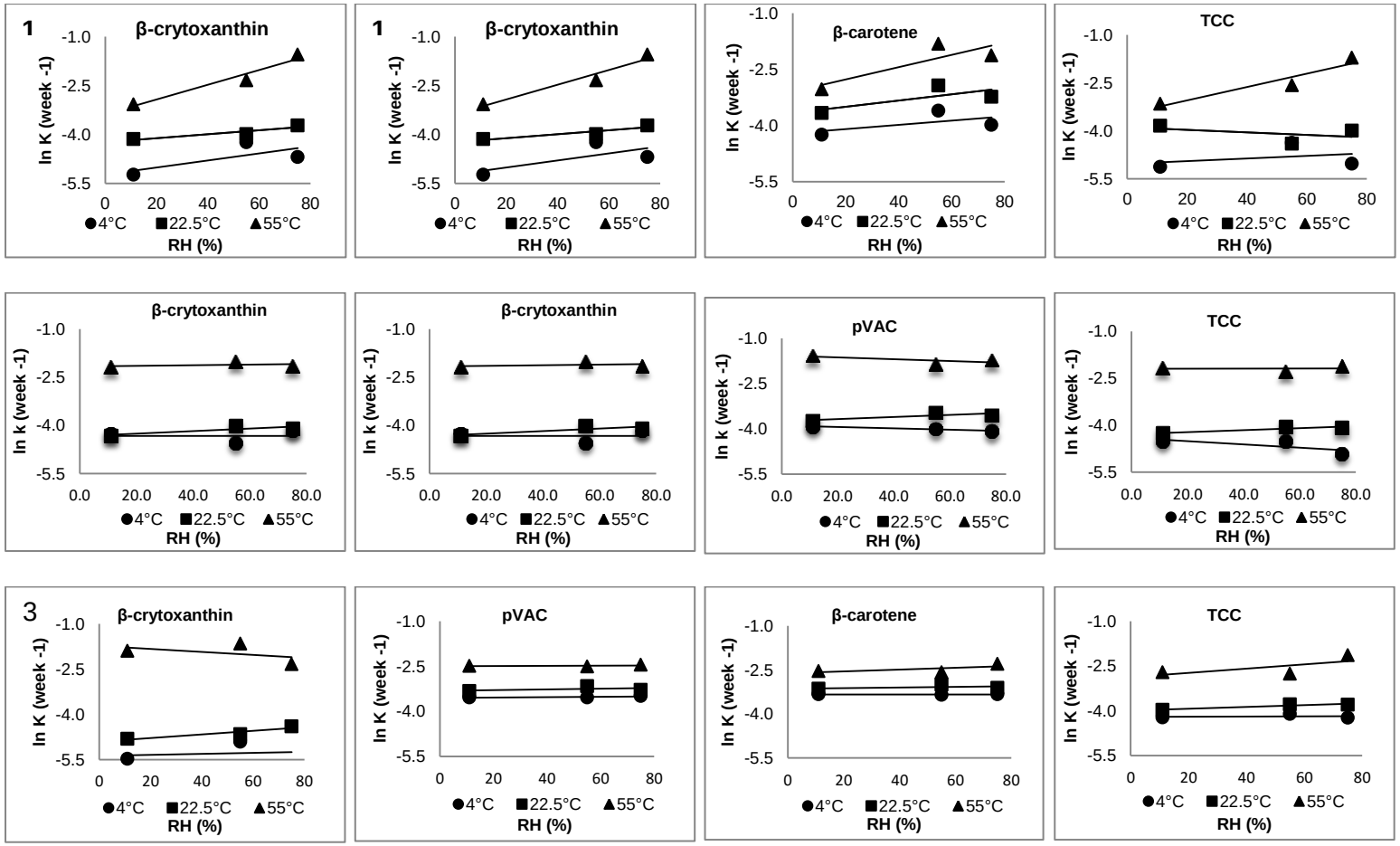
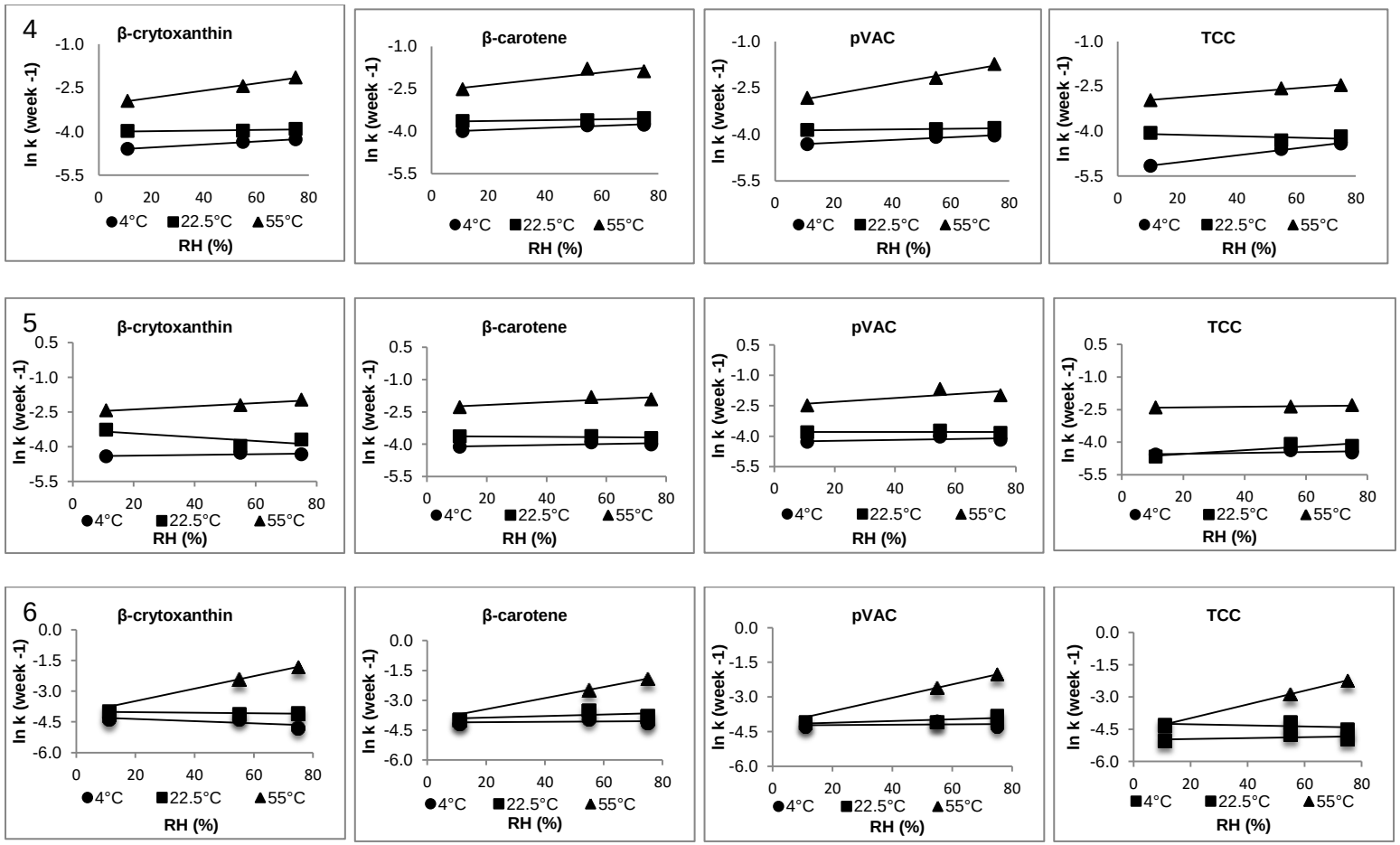

4
β-crytoxanthin
lnk (week -1)
-1.0
-2.5
-4.0
-5.5
0.003 0.0032 0.0034 0.0036
●11% ■55% ▲75%
1/T (K)
β-carotene
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
pVAC
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
TCC
ln k (week -1)
▲11% ■55% ●75%
1/T (K)
5
β-crytoxanthin
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
β-carotene
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
pVAC
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
TCC
ln k (week -1)
●11% ■55% ▲75%
1/T (K)
6
β-crytoxanthin
ln k (week -1)
■11% ▲55% ●75%
1/T (K)
β-carotene
ln k (week -1)
■11% ▲55% ●75%
1/T (K)
pVAC
ln k (week -1)
■11% ▲55% ●75%
1/T (K)
TCC
ln k (week -1)
■11% ▲55% ●75%
1/T (K)

Figure S3. Degradation rate constant rate constants of β-crytoxanthin, β-carotene, pVAC and TCC in 6 biofortified maize genotypes as a function of RH (or a_w X 100). Number in the upper left of each graph represent the genotype according to table 1.




4
β-crytoxanthin
β-carotene
pVAC
TCC
5
6
ln k (week -1)
RH (%)
●4°C ■22.5°C ▲55°C