

## SUPPLEMENTARY MATERIAL

Table S1. Mean values of the 5 sampling dates for all elements measured by ICP/OES, and C and N from the three locations in the Basque Country, Spain. Data correspond to the mean (5 days) $\pm$ SE of n=30 replicates. Letters indicate significant differences between locations (Tukey post hoc test  $P<0.05$ ).

Location	Bilbao	Vitoria	Muskiz
Al (mg/Kg)	295.6 $\pm$ 20.1 <sup>a</sup>	154.5 $\pm$ 12.9 <sup>b</sup>	122.9 $\pm$ 7.6 <sup>b</sup>
B (mg/Kg)	40.2 $\pm$ 2.6 <sup>b</sup>	157.3 $\pm$ 15.7 <sup>a</sup>	53.7 $\pm$ 2.8 <sup>b</sup>
C (g/100g)	45.4 $\pm$ 0.2 <sup>a</sup>	44.7 $\pm$ 0.2 <sup>a</sup>	40.3 $\pm$ 0.2 <sup>b</sup>
Ca (g/100g)	2.12 $\pm$ 0.11 <sup>b</sup>	2.88 $\pm$ 0.20 <sup>a</sup>	2.90 $\pm$ 0.13 <sup>a</sup>
Cd (mg/Kg)	0.087 $\pm$ 0.006 <sup>a</sup>	0.023 $\pm$ 0.002 <sup>b</sup>	0.013 $\pm$ 0.001 <sup>b</sup>
Co (mg/Kg)	0.088 $\pm$ 0.011 <sup>a</sup>	0.033 $\pm$ 0.004 <sup>b</sup>	0.020 $\pm$ 0.004 <sup>b</sup>
Cr (mg/Kg)	7.65 $\pm$ 0.43 <sup>a</sup>	2.34 $\pm$ 0.19 <sup>b</sup>	1.83 $\pm$ 0.16 <sup>b</sup>
Cu (mg/Kg)	16.50 $\pm$ 0.64 <sup>a</sup>	11.86 $\pm$ 0.68 <sup>b</sup>	8.04 $\pm$ 0.22 <sup>c</sup>
Fe (mg/Kg)	643.4 $\pm$ 36.2 <sup>a</sup>	329.6 $\pm$ 28.6 <sup>b</sup>	223.9 $\pm$ 13.9 <sup>b</sup>
K (g/100g)	1.57 $\pm$ 0.06 <sup>a</sup>	1.03 $\pm$ 0.06 <sup>b</sup>	1.63 $\pm$ 0.09 <sup>a</sup>
Li (mg/Kg)	0.58 $\pm$ 0.1 <sup>b</sup>	1.09 $\pm$ 0.12 <sup>a</sup>	0.31 $\pm$ 0.06 <sup>b</sup>
Mg (g/100g)	0.31 $\pm$ 0.02 <sup>b</sup>	0.46 $\pm$ 0.02 <sup>b</sup>	0.30 $\pm$ 0.01 <sup>a</sup>
Mn (mg/Kg)	50.4 $\pm$ 1.8 <sup>a</sup>	35.1 $\pm$ 1.4 <sup>b</sup>	43.0 $\pm$ 3.6 <sup>ab</sup>
N (g/100g)	2.63 $\pm$ 0.08 <sup>a</sup>	2.22 $\pm$ 0.10 <sup>b</sup>	2.39 $\pm$ 0.05 <sup>b</sup>
Na (g/100g)	0.035 $\pm$ 0.003 <sup>a</sup>	0.008 $\pm$ 0.001 <sup>b</sup>	0.015 $\pm$ 0.002 <sup>b</sup>
Ni (mg/Kg)	1.82 $\pm$ 0.10 <sup>a</sup>	1.43 $\pm$ 0.09 <sup>b</sup>	1.00 $\pm$ 0.12 <sup>c</sup>
Pb (mg/Kg)	2.86 $\pm$ 0.16 <sup>a</sup>	0.86 $\pm$ 0.08 <sup>b</sup>	0.54 $\pm$ 0.06 <sup>b</sup>
P (g/100g)	0.23 $\pm$ 0.01 <sup>a</sup>	0.22 $\pm$ 0.01 <sup>a</sup>	0.15 $\pm$ 0.01 <sup>b</sup>
Rb (mg/Kg)	9.61 $\pm$ 0.77 <sup>a</sup>	4.84 $\pm$ 0.58 <sup>b</sup>	2.21 $\pm$ 0.20 <sup>c</sup>
Si (mg/Kg)	359.3 $\pm$ 36.6 <sup>a</sup>	128.2 $\pm$ 13.3 <sup>b</sup>	193.0 $\pm$ 24.0 <sup>b</sup>
S (g/100g)	0.16 $\pm$ 0.01 <sup>a</sup>	0.13 $\pm$ 0.01 <sup>b</sup>	0.13 $\pm$ 0.01 <sup>b</sup>
Sr (mg/Kg)	90.1 $\pm$ 4.3 <sup>c</sup>	316.2 $\pm$ 25.3 <sup>b</sup>	433.2 $\pm$ 20.6 <sup>a</sup>
Ti (mg/Kg)	12.02 $\pm$ 0.78 <sup>a</sup>	5.76 $\pm$ 0.51 <sup>b</sup>	7.47 $\pm$ 0.60 <sup>b</sup>
Tl (mg/Kg)	0.48 $\pm$ 0.07 <sup>b</sup>	1.23 $\pm$ 0.07 <sup>a</sup>	0.62 $\pm$ 0.10 <sup>b</sup>
V (mg/Kg)	0.77 $\pm$ 0.07 <sup>a</sup>	0.32 $\pm$ 0.04 <sup>b</sup>	0.23 $\pm$ 0.03 <sup>b</sup>
Zn (mg/Kg)	47.8 $\pm$ 2.50 <sup>a</sup>	26.42 $\pm$ 1.44 <sup>b</sup>	36.2 $\pm$ 1.59 <sup>c</sup>

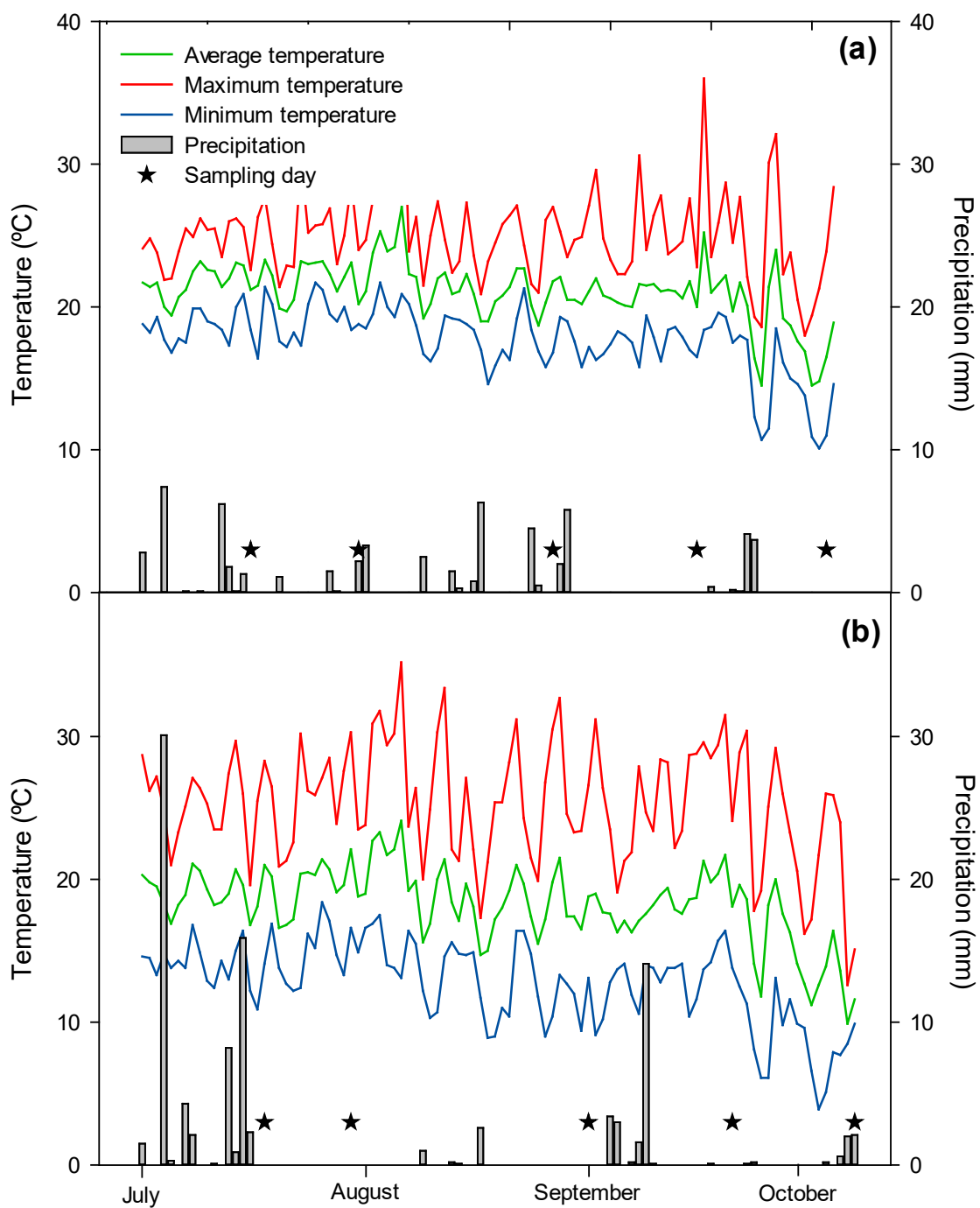


Figure S1. Daily measures of meteorological conditions (precipitation, maximum, minimum and average temperature) through the sampling period (July-October) in a) Bilbao/Muskiz and b) Vitoria.