

Table S1. Two-way ANOVA tables for the chemical composition of lime (*Tilia cordata* Mill.) bark and wood depending on tissue and environment.

| Chemical composition | Effect | SS | df | MS | F value | p-value |
|-----------------------|-----------------|--------|----|--------|---------|---------|
| Holocellulose | Tissue (a) | 4237.1 | 1 | 4237.1 | 613.67 | 0.0000 |
| | Environment (b) | 1.4273 | 2 | 0.7136 | 0.10336 | 0.9021 |
| | a x b | 81.796 | 2 | 40.898 | 5.9235 | 0.0058 |
| Cellulose | Tissue (a) | 1163 | 1 | 1163.2 | 652.22 | 0.0000 |
| | Environment (b) | 11.156 | 2 | 5.58 | 3.1277 | 0.0553 |
| | a x b | 55.624 | 2 | 27.81 | 15.594 | 0.0000 |
| Pentosans | Tissue (a) | 726.37 | 1 | 726.37 | 564.13 | 0.0000 |
| | Environment (b) | 3.6972 | 2 | 1.849 | 1.4357 | 0.2512 |
| | a x b | 2.0090 | 2 | 1.004 | 0.78013 | 0.4659 |
| Lignin | Tissue (a) | 4504.5 | 1 | 4504.5 | 4095.3 | 0.0000 |
| | Environment (b) | 156.85 | 2 | 78.427 | 71.304 | 0.0000 |
| | a x b | 68.375 | 2 | 34.187 | 31.082 | 0.0000 |
| Substances soluble in | Tissue (a) | 3082.4 | 1 | 3082.4 | 416.14 | 0.0000 |
| | Environment (b) | 14.376 | 2 | 7.1881 | 0.97044 | 0.3892 |
| | a x b | 168.12 | 2 | 84.061 | 11.349 | 0.0002 |
| Substances soluble in | Tissue (a) | 240.39 | 1 | 240.39 | 58.599 | 0.0000 |
| | Environment (b) | 68.245 | 2 | 34.122 | 8.3180 | 0.0010 |
| | a x b | 11.611 | 2 | 5.8054 | 1.4152 | 0.2557 |

SS – a sum of squares, df – degrees of freedom, MS – mean squares, F – Fisher's F – test

Table S2. Two-way ANOVA tables for the chemical composition of elements (K, Ca, Na, Mg) in lime (*Tilia cordata* Mill.) depending on tissue and environment.

| Chemical composition | Effect | SS | df | MS | F value | p-value |
|----------------------|------------|--------|----|--------|---------|---------|
| K | Tissue (a) | 486267 | 1 | 486267 | 3020.7 | 0.0000 |

| | | | | | | |
|----|--------------------|---------|---|--------|--------|--------|
| | Environment (b) | 601972 | 2 | 300986 | 1869.7 | 0.0000 |
| | a x b | 1520713 | 2 | 760356 | 4723.3 | 0.0000 |
| Ca | Tissue (a) | 5855263 | 1 | 585526 | 294.68 | 0.0000 |
| | Environment (b) | 8934733 | 2 | 446736 | 224.83 | 0.0000 |
| | a x b | 1744419 | 2 | 872209 | 43.896 | 0.0000 |
| Na | Tissue (a) | 5590.2 | 1 | 5590.2 | 67.438 | 0.0000 |
| | Environment (b) | 451614 | 2 | 225807 | 2724.0 | 0.0000 |
| | a x b | 1555546 | 2 | 777773 | 9382.7 | 0.0000 |
| Mg | Tissue (a) | 16011 | 1 | 16011 | 202.38 | 0.0000 |
| | Environment (b) | 13416 | 2 | 6707.9 | 84.792 | 0.0000 |
| | a x b | 243681 | 2 | 121841 | 1540.1 | 0.0000 |

SS – a sum of squares, df – degrees of freedom, MS – mean squares, F – Fisher's F-test.

Contents of potassium, sodium, magnesium and calcium (Table 2) in bark and wood changed markedly and differences between the results were statistically significant.

Table S3. Two-way ANOVA tables for the chemical composition of elements (Fe, Zn, Cu, Pb, Cd, B, Ni, Cr, Al, As, Hg) of lime (*Tilia cordata* Mill.) wood depending on tissue and environment.

| Chemical composition | Effect | SS | df | MS | F value | p-value |
|----------------------|-----------------|--------|----|--------|---------|---------|
| Fe | Tissue (a) | 46393 | 1 | 46393 | 10915 | 0.0000 |
| | Environment (b) | 8730.2 | 2 | 4365.1 | 1027.0 | 0.0000 |
| | a x b | 46489 | 2 | 23245 | 5468.9 | 0.0000 |
| Zn | Tissue (a) | 658.65 | 1 | 658.65 | 13953 | 0.0000 |
| | Environment (b) | 105.32 | 2 | 52.662 | 1115.6 | 0.0000 |
| | a x b | 122.62 | 2 | 61.311 | 1298.9 | 0.0000 |
| Cu | Tissue (a) | 145.29 | 1 | 145.29 | 5085.9 | 0.0000 |
| | Environment (b) | 70.277 | 2 | 35.139 | 1230.0 | 0.0000 |
| | a x b | 100.43 | 2 | 50.214 | 1757.7 | 0.0000 |
| Pb | Tissue (a) | 913.57 | 1 | 913.57 | 15915 | 0.0000 |

| | | | | | | | |
|----|--|-----------------|---------|---|---------|--------|--------|
| | | Environment (b) | 289.38 | 2 | 144.69 | 2520.5 | 0.0000 |
| | | a x b | 331.08 | 2 | 165.54 | 2883.8 | 0.0000 |
| Cd | | Tissue (a) | 0.09838 | 1 | 0.09838 | 96.296 | 0.0000 |
| | | Environment (b) | 1.0965 | 2 | 0.54826 | 536.65 | 0.0000 |
| | | a x b | 0.00231 | 2 | 0.00115 | 1.1288 | 0.3555 |
| B | | Tissue (a) | 69.862 | 1 | 69.862 | 750.47 | 0.0000 |
| | | Environment (b) | 805.62 | 2 | 402.81 | 4327.1 | 0.0000 |
| | | a x b | 28.597 | 2 | 14.298 | 153.60 | 0.0000 |
| Ni | | Tissue (a) | 30.544 | 1 | 30.544 | 1094.9 | 0.0000 |
| | | Environment (b) | 66.639 | 2 | 33.319 | 1194.4 | 0.0000 |
| | | a x b | 17.322 | 2 | 8.6608 | 310.45 | 0.0000 |
| Cr | | Tissue (a) | 12.198 | 1 | 12.198 | 386.88 | 0.0000 |
| | | Environment (b) | 66.769 | 2 | 33.384 | 1058.8 | 0.0000 |
| | | a x b | 2.6887 | 2 | 1.3443 | 42.638 | 0.0000 |
| Al | | Tissue (a) | 3554.9 | 1 | 3555 | 53.287 | 0.0000 |
| | | Environment (b) | 45746 | 2 | 22873 | 342.85 | 0.0000 |
| | | a x b | 18625 | 2 | 9312 | 139.59 | 0.0000 |
| As | | Tissue (a) | 0.00091 | 1 | 0.00091 | 17590 | 0.0000 |
| | | Environment (b) | 0.00011 | 2 | 0.00006 | 1111.8 | 0.0000 |
| | | a x b | 0.00018 | 2 | 0.00009 | 1732.1 | 0.0000 |
| Hg | | Tissue (a) | 0.00233 | 1 | 0.00233 | 48.328 | 0.0000 |
| | | Environment (b) | 0.00091 | 2 | 0.00046 | 9.4590 | 0.0034 |
| | | a x b | 0.00110 | 2 | 0.00055 | 11.419 | 0.0017 |

SS – a sum of squares, df – degrees of freedom, MS – mean squares, F – Fisher's F-test.

Contents of selected heavy metals (Tables 3 a, b) determined in bark and wood changed greatly. Differences in the obtained results were statistically significant.