**Table S6: p-values of post-hoc tests for differences between the mean ACL of *n*-alkanes and vegetation types (top) and ACL and horizons within the same vegetation type (bottom), p<0.05 indicates a significant relationship at the 95% confidence level (bold values), con= coniferous trees, dec= deciduous trees, grass= grasslands, L: litter, Ah1= topsoil 1 (0-3 cm), Ah2= topsoil 2 (3-10 cm), columns containing the phrase “without beeches” only comprise dec locations L15, L19, L 22, L25, L26-1, L26-2, grey numbers indicate no significant differences in ANOVA.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Vegetation types** | | | | | | |
|  | **L** | **Ah1** | **Ah2** | **L**  **(without beeches)** | **Ah1**  **(without beeches)** | **Ah2**  **(without beeches)** |
| con-dec | **0.004** | **1.3e-05** | **0.004** | 0.40 | **0.01** | 0.362 |
| con-grass | - | 1.00 | 1.00 | - | 0.10 | 0.362 |
| dec-grass | - | **7.8e-09** | **0.0002** | - | **0.0009** | 0.362 |
| **Horizons** | | | | | | |
|  | **con** | **dec** | **grass** | **dec (without beeches)** | | |
| L-Ah1 | 0.16 | 0.32 | - | 0.90 | | |
| L-Ah2 | 0.06 | **0.004** | - | 0.27 | | |
| Ah1-Ah2 | 0.86 | 0.12 | 0.95 | 0.47 | | |