**Appendix A. Supplementary data**



Fig. s1 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 1: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s2 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 2: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s3 Chromatographic profiles obtained by THM-Py–GC/MS of red layer of sample 2: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s4 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 2: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s5 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 3: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s6 Chromatographic profiles obtained by THM-Py–GC/MS of red layer of sample 3: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s7 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 3: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s8 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 4: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s9 Chromatographic profiles obtained by THM-Py–GC/MS of red layer of sample 4: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s10 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 4: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s11 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 5: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s12 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 5: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s13 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 6: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s14 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 6: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s15 Chromatographic profiles obtained by THM-Py–GC/MS of black layer of sample 7: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.



Fig. s16 Chromatographic profiles obtained by THM-Py–GC/MS of ground layer of sample 7: (a) total ion pyrogram; (b) m/z 55 extracted ion pyrogram; (c) m/z 57 extracted ion pyrogram; (d) m/z 91 extracted ion pyrogram.