

An investigation of the dye palette in Chinese silk embroidery from Dunhuang (Tang dynasty)

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Supplementary material

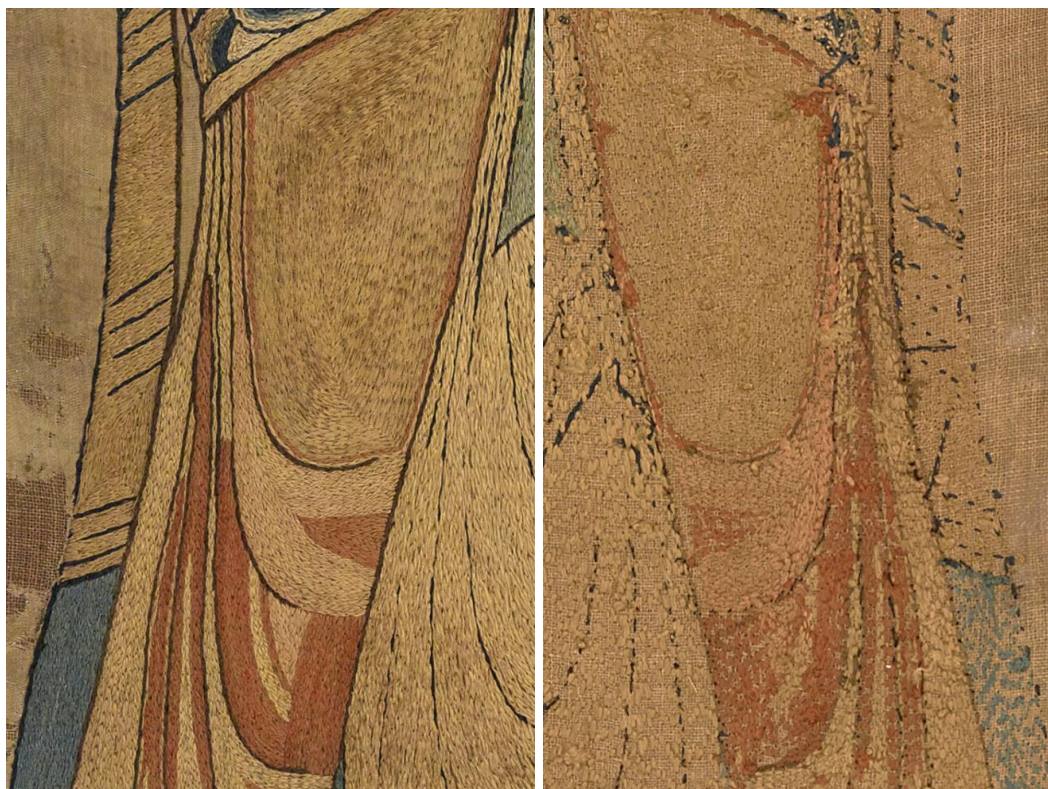


Figure S1. Comparison of the same area from the front (left) and the back (right) of the embroidery showing the difference in the brightness of the pink colour.

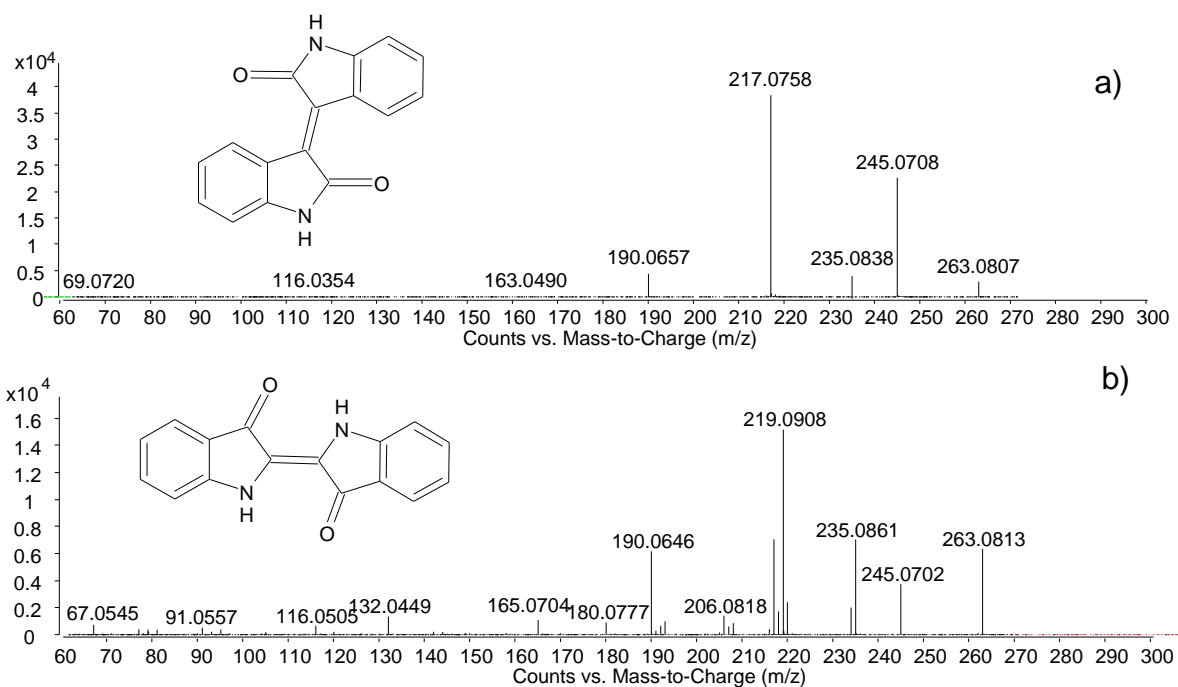


Figure S2. MS/MS spectra (positive ESI, collision energy 30V) of **a)** indigotin isomer, tentatively assigned to isoindigotin compared to **b)** indigotin.

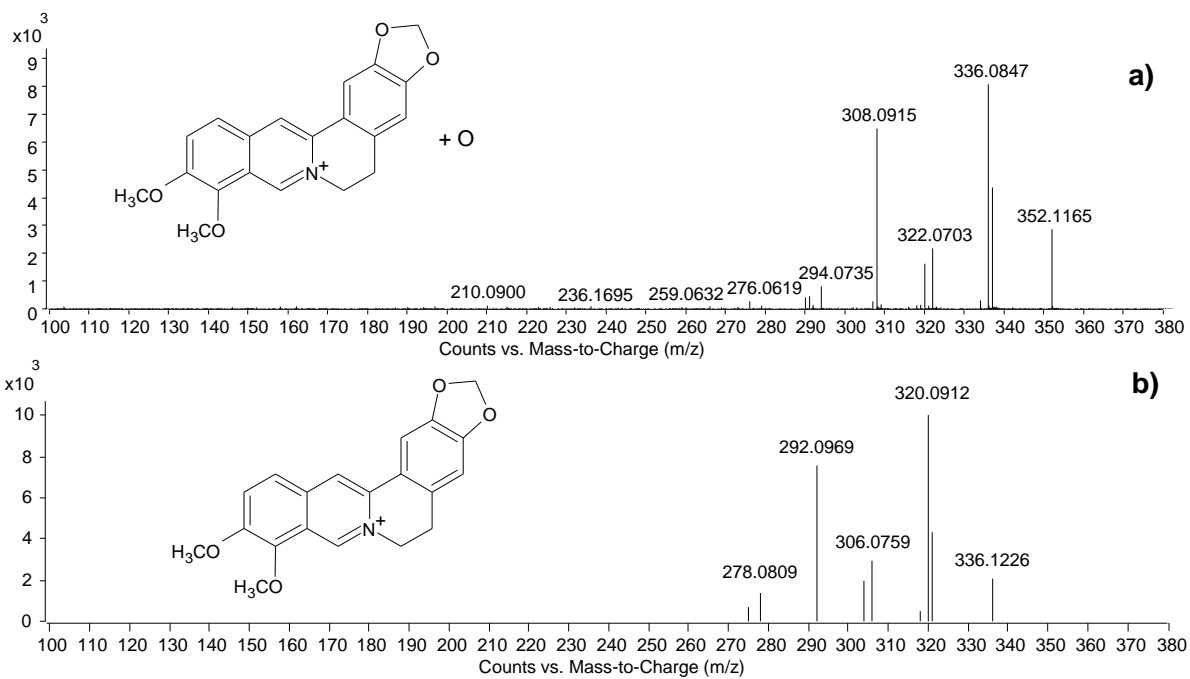


Figure S3. MS/MS spectra (positive ESI, collision energy 30V) of **a)** berberine oxidation product compared to **b)** berberine.

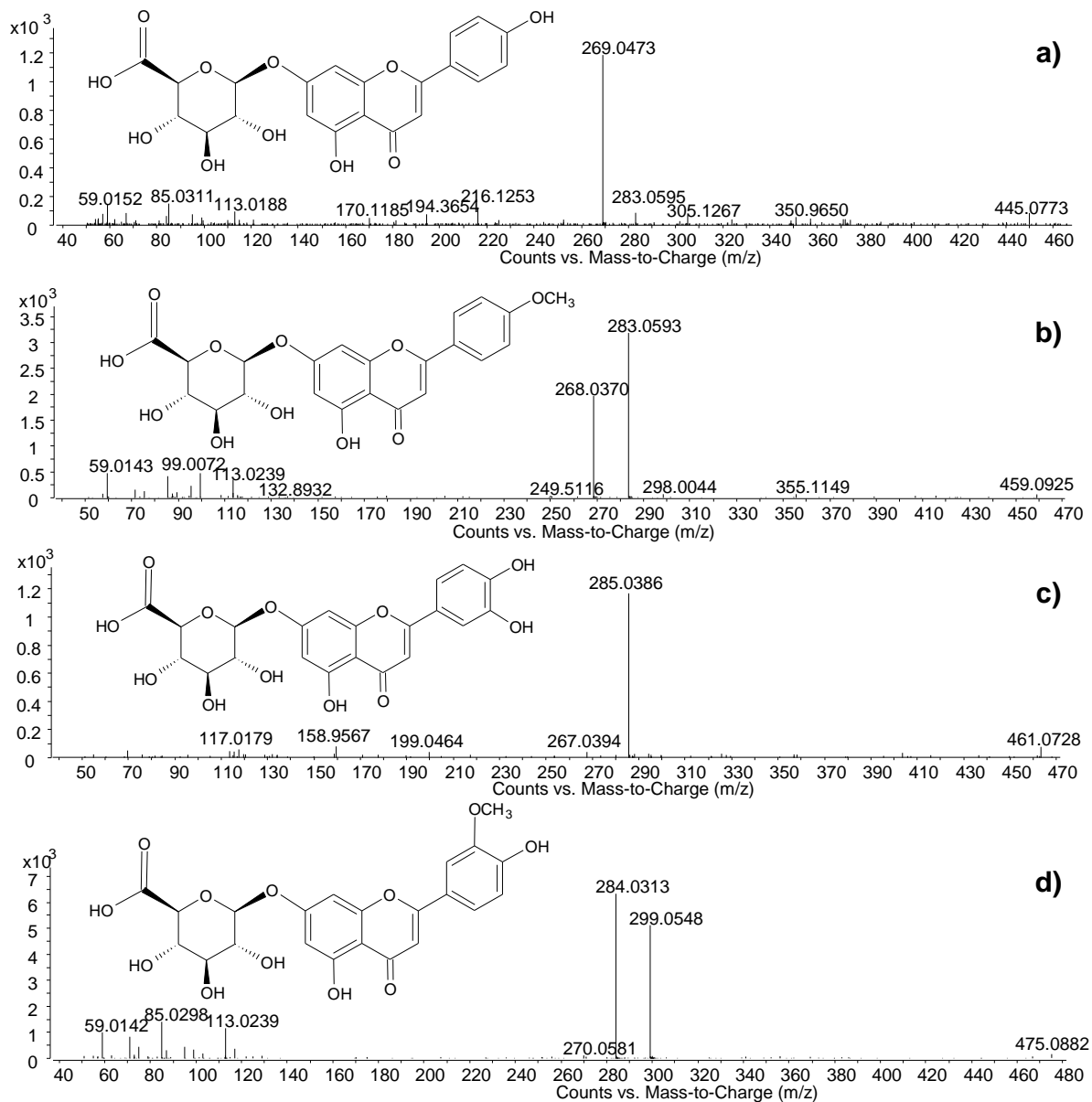


Figure S4. MS/MS spectra (negative ESI, collision energy 20V) of **a)** apigenin glucuronide, **b)** O-methylated flavone glucuronide, **c)** luteolin glucuronide, **d)** chrysoeriol glucuronide detected in the pink sample 20D.

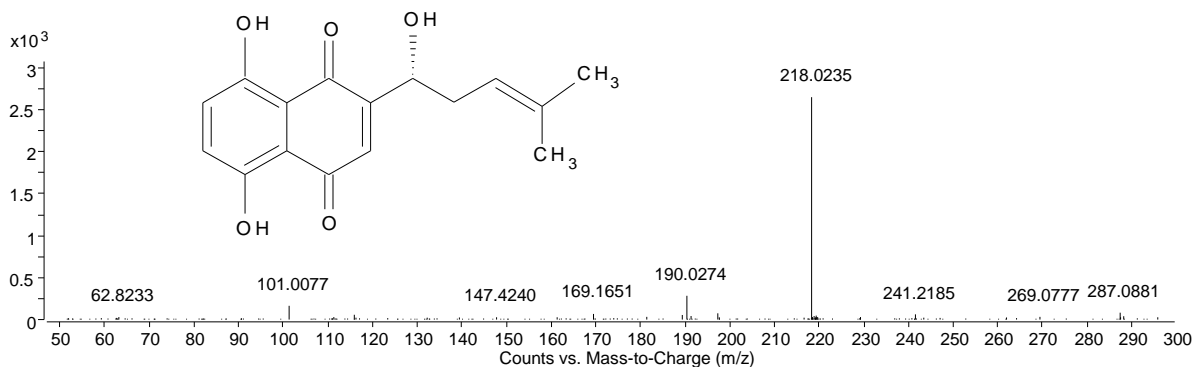


Figure S5. MS/MS spectrum (negative ESI, collision energy 20V) of shikonin.

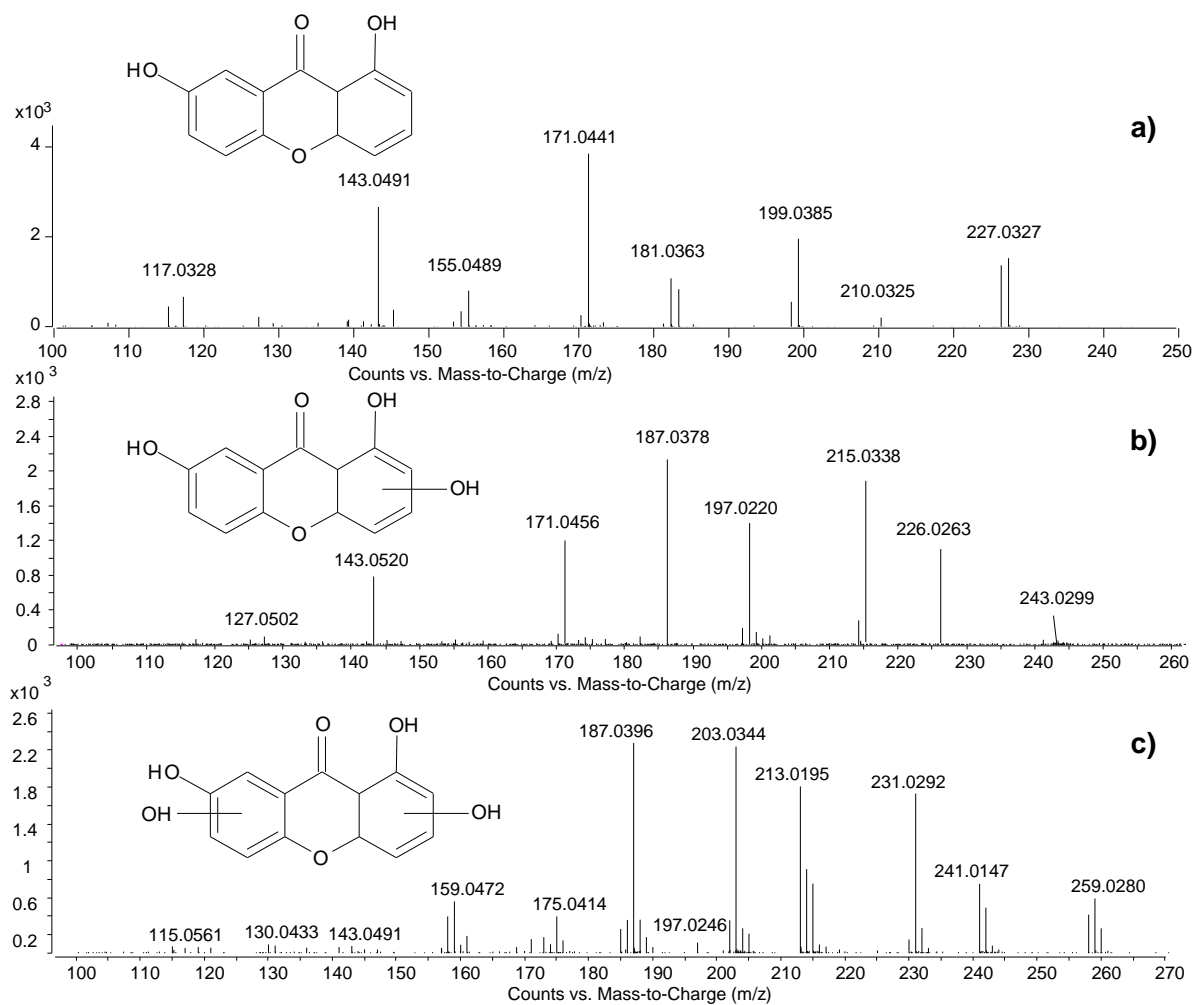


Figure S6. MS/MS spectra (negative ESI, collision energy 25V) of **a)** euxanthone (dihydroxyxanthone), **b)** "type C compound" (tentatively assigned to trihydroxyxanthone) and **c)** oxidation product of "type C compound" (tentatively assigned to tetrahydroxyxanthone).

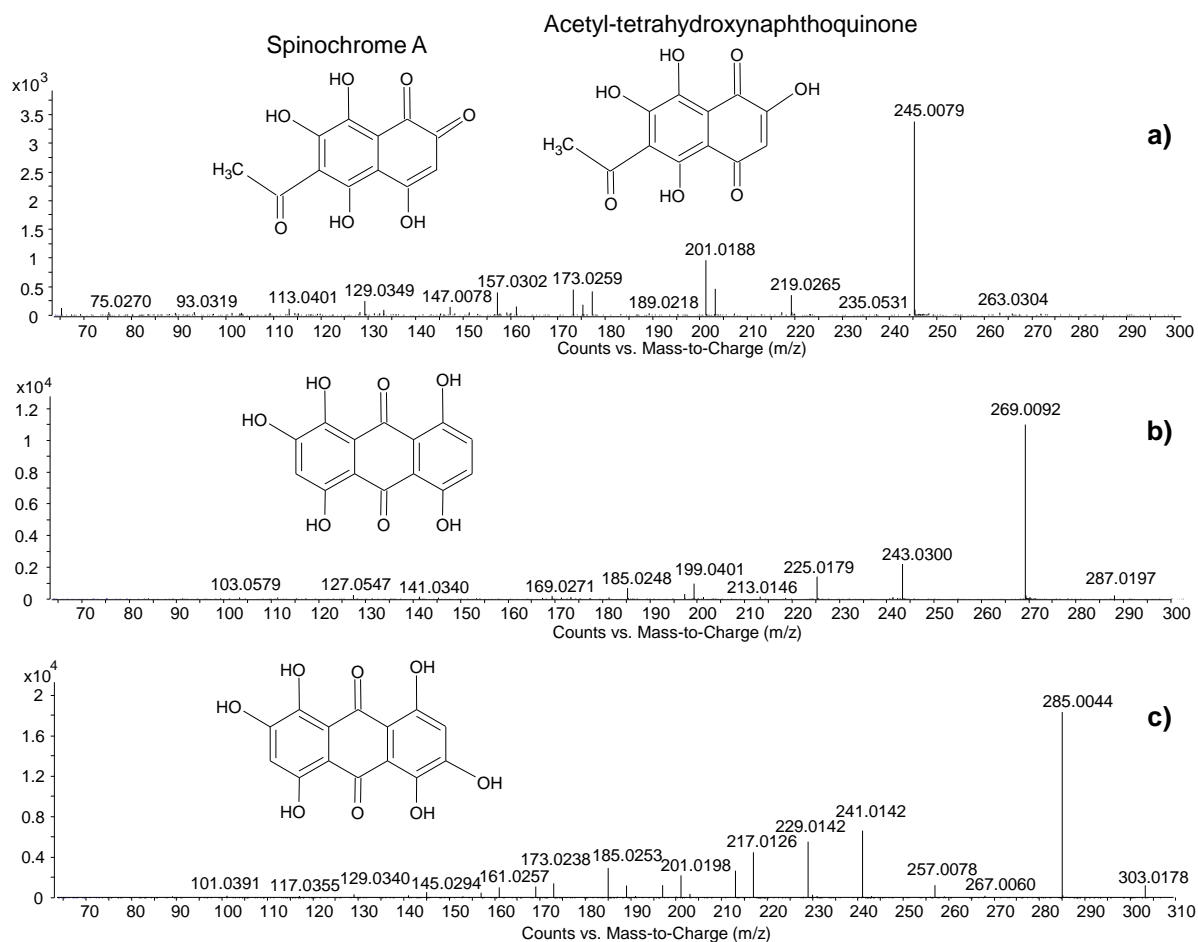


Figure S7. MS/MS spectra (negative ESI, collision energy 25V) of some compounds detected in samples 11D and 23D with calculated molecular masses of the deprotonated molecules **a)** m/z 263.0197 (tentatively assigned to spinochrome A or acetyl-tetrahydroxynaphthoquinone), **b)** m/z 287.0197 (tentatively assigned to pentahydroxyanthraquinone) and **c)** 303.0146 (tentatively assigned to hexahydroxyanthraquinone).

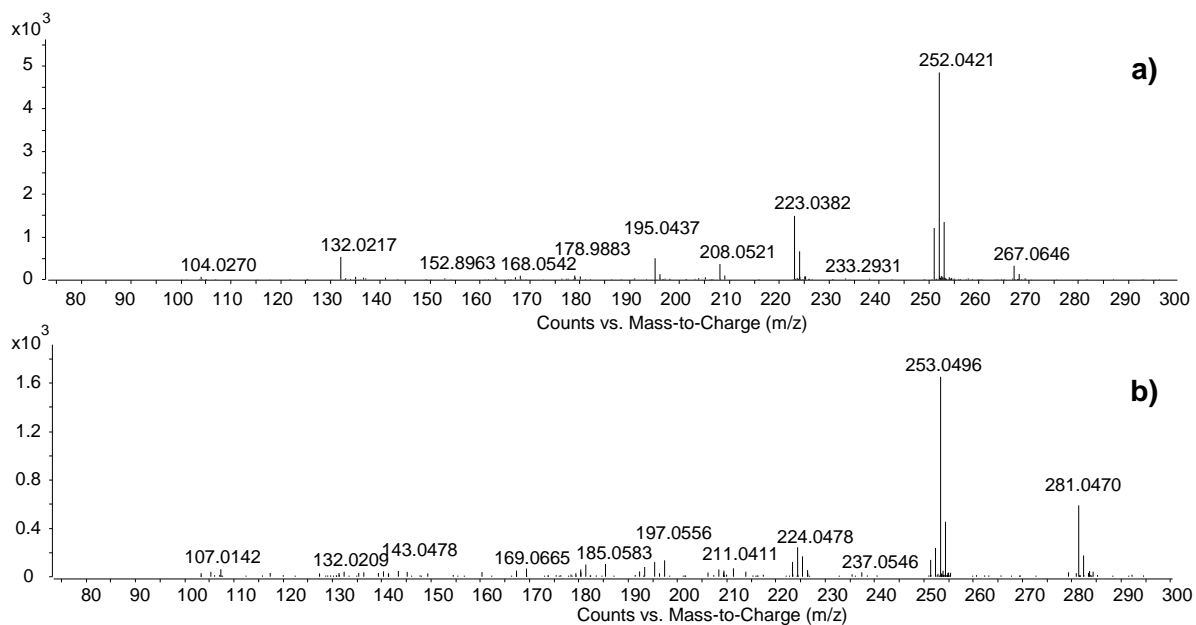


Figure S8. MS/MS spectra (negative ESI, collision energy 25V) of some compounds detected in samples 11D and 23D with calculated molecular masses of the deprotonated molecules **a)** m/z 267.0663 and **b)** m/z 281.0455.

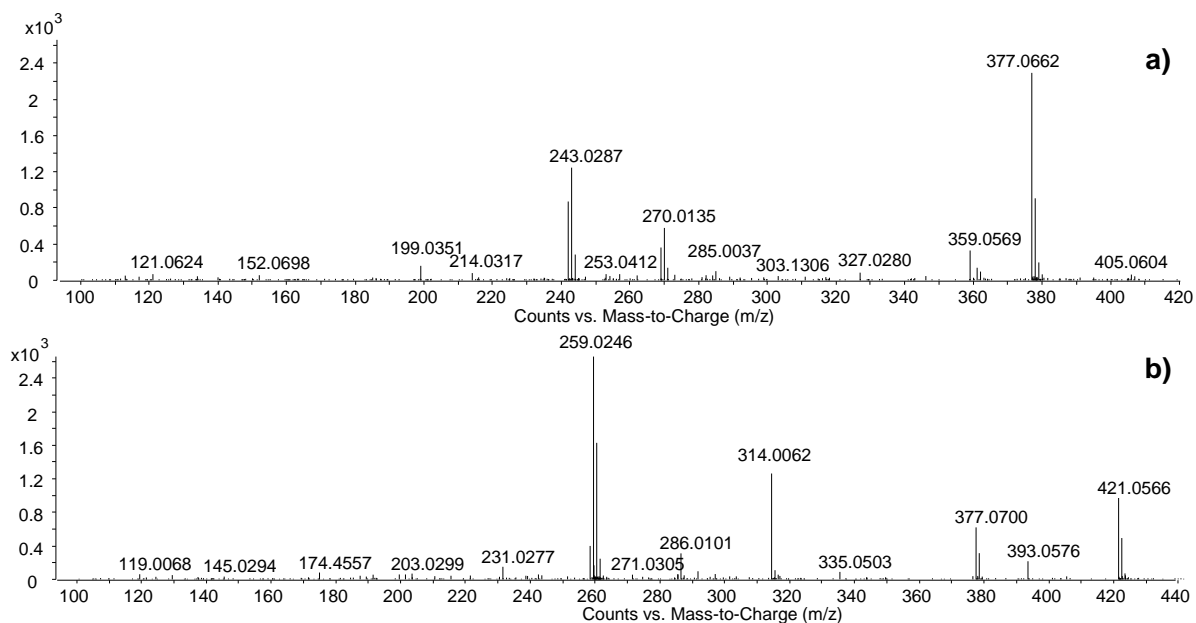


Figure S9. MS/MS spectra (negative ESI, collision energy 25V) of some compounds detected in samples 11D and 23D with calculated molecular masses of the deprotonated molecules **a)** m/z 405.0616 and **b)** m/z 421.0565.