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## An LC-MS/MS Analysis of Opiate Residues on Thomas Chatterton's Memorandum Book – Did he Die from a Laudanum Overdose?

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## Supplementary Information

Notes:

The degradation products are presented in their order of elution from the LC-MS/MS analysis in figure 5 – refer to table 1 for further details. In the LC-ESI-MS/MS spectra (figure S1 to S15), ions labelled in green indicate those that are identified in the proposed fragmentation scheme. In the fragmentation schemes, the precursor ion is shown boxed in red.



**Figure S1**. (a) LC-ESI-MS/MS of degradation product A (m/z = 261). (b) The proposed fragmentation scheme for precursor ion m/z 261.



**Figure S2**. (a) LC-ESI-MS/MS of degradation product B (m/z = 259). (b) The proposed fragmentation scheme for precursor ion m/z 259.



**Figure S3**. (a) LC-ESI-MS/MS of degradation product C (m/z = 231). (b) The proposed fragmentation scheme for precursor ion m/z 231.





**Figure S4**. (a) LC-ESI-MS/MS of degradation product D (m/z = 275). (b) The proposed fragmentation scheme for precursor ion m/z 275.



**Figure S5**. (a) LC-ESI-MS/MS of degradation product D (m/z = 257). (b) The proposed fragmentation scheme for precursor ion m/z 257.



**Figure S6**. (a) LC-ESI-MS/MS of degradation product G (m/z = 245). (b) The proposed fragmentation scheme for precursor ion m/z 245.



**Figure S7**. (a) LC-ESI-MS/MS of degradation product H (m/z = 273). (b) The proposed fragmentation scheme for precursor ion m/z 273.



**Figure S8**. (a) LC-ESI-MS/MS of degradation product J (m/z = 287). (b) The proposed fragmentation scheme for precursor ion m/z 287.

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**Figure S9**. (a) LC-ESI-MS/MS of degradation product K (m/z = 283). (b) The proposed fragmentation scheme for precursor ion m/z 283.



**Figure S10**. (a) LC-ESI-MS/MS of degradation product L (m/z = 229). (b) The proposed fragmentation scheme for precursor ion m/z 229.



**Figure S11**. (a) LC-ESI-MS/MS of degradation product M (m/z = 285). (b) The proposed fragmentation scheme for precursor ion m/z 285.

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**Figure S12**. (a) LC-ESI-MS/MS of degradation product N (m/z = 233). (b) The proposed fragmentation scheme for precursor ion m/z 233.



**Figure S13**. (a) LC-ESI-MS/MS of degradation product P (m/z = 273). (b) The proposed fragmentation scheme for precursor ion m/z 273.



**Figure S14**. (a) LC-ESI-MS/MS of degradation product Q (m/z = 291). (b) The proposed fragmentation scheme for precursor ion m/z 291.



**Figure S15**. (a) LC-ESI-MS/MS of degradation product R (m/z = 269). (b) The proposed fragmentation scheme for precursor ion m/z 269.



**Figure S16**. (a) EIC for morphenol ( $[M+H]^+ m/z = 209$ ) showing elution at 3.47 minutes. (b) The LC-ESI-MS/MS of morphenol (m/z 209).