

1 Supplement

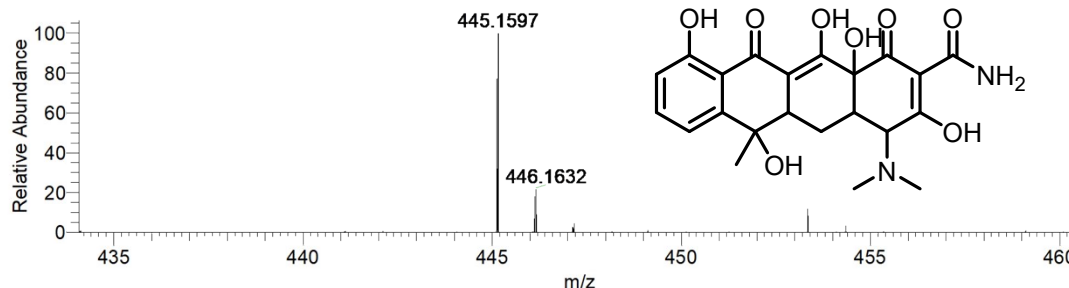
2 Synthesis of Fe₃O₄ particles

3 Magnetic Fe₃O₄ particles have been prepared by the improvement of previous
4 methods. FeCl₃•6H₂O (6.8 g), trisodium citrate dihydrate (2.0 g) and sodium acetate
5 (12.0 g) were dissolved in 50 mL ethylene glycol and placed in a 500 mL beaker. After
6 ultrasonic dissolution, the mixture was transferred to a Teflon-lined stainless steel and
7 kept in an oven at 200 °C for 8 h. When the reaction was complete, the product was
8 washed several times with ethanol and ultrapure water and dried under vacuum at 60
9 °C.

10

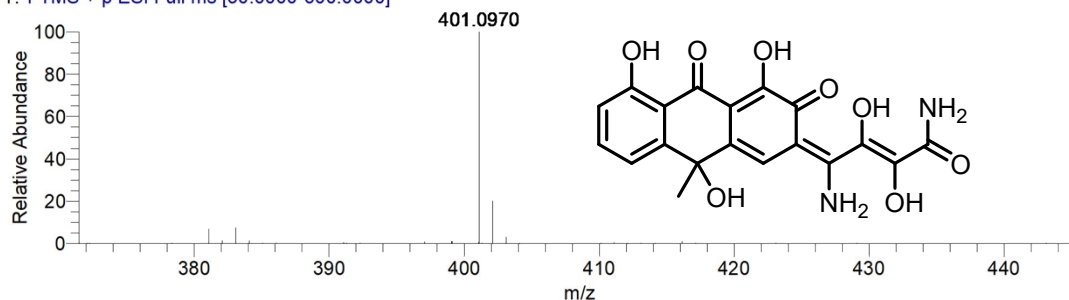
11 Mass spectra

sample-A #4898 RT: 9.15 AV: 1 SB: 2 9.09 , 9.29 NL: 2.38E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



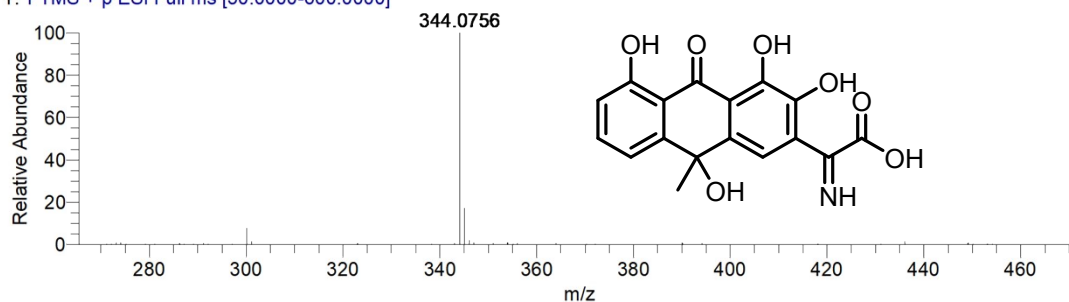
12

sample-A #5788 RT: 10.73 AV: 1 SB: 2 10.65 , 11.41 NL: 1.45E7
T: FTMS + p ESI Full ms [50.0000-600.0000]



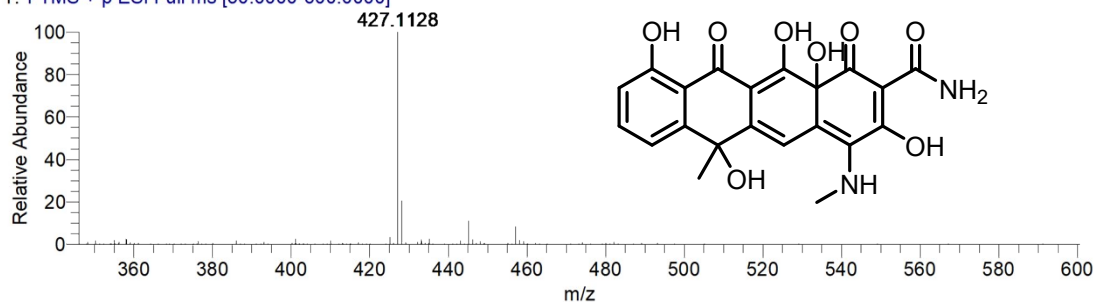
13

sample-A #4094 RT: 7.62 AV: 1 SB: 2 7.50 , 7.96 NL: 3.74E7
T: FTMS + p ESI Full ms [50.0000-600.0000]



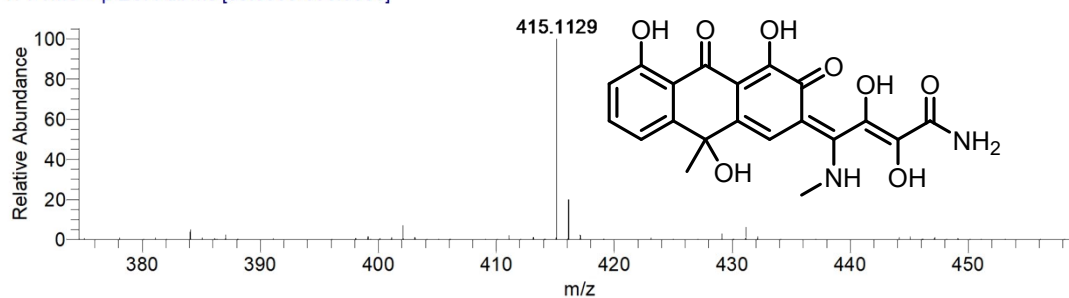
14

sample-A #5255 RT: 9.78 AV: 1 SB: 2 9.63 , 9.98 NL: 8.17E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



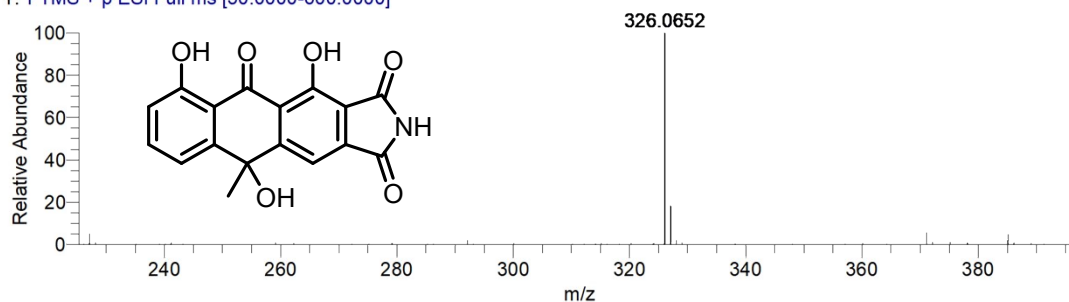
15

sample-A #5145 RT: 9.59 AV: 1 SB: 2 9.46 , 9.73 NL: 3.71E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



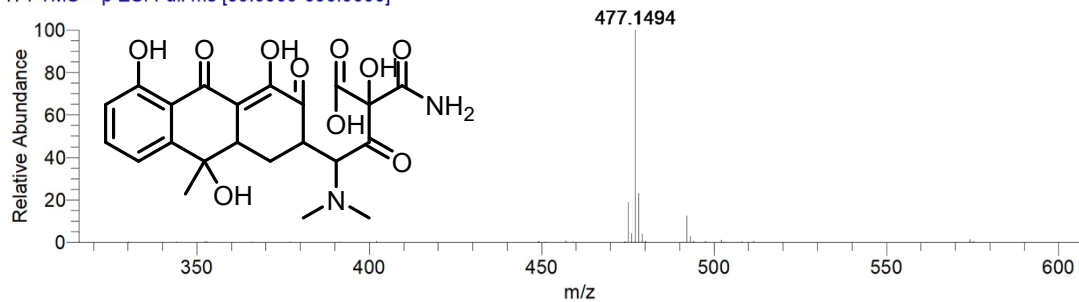
16

sample-A #5008 RT: 9.34 AV: 1 SB: 2 9.19 , 9.69 NL: 2.11E7
T: FTMS + p ESI Full ms [50.0000-600.0000]



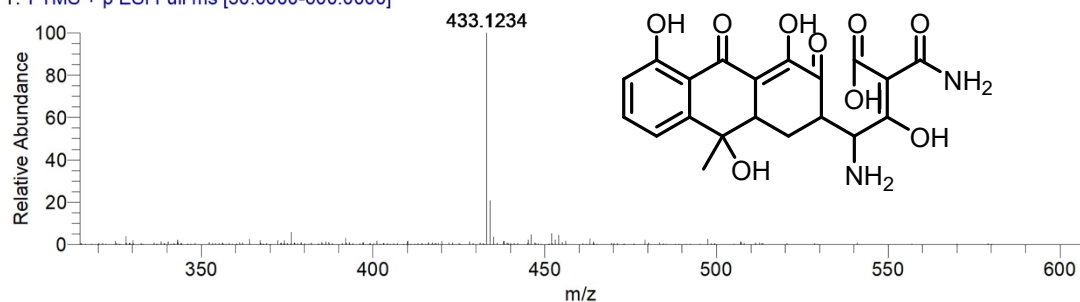
17

sample-A #2971 RT: 5.45 AV: 1 SB: 2 5.32 , 5.81 NL: 3.96E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



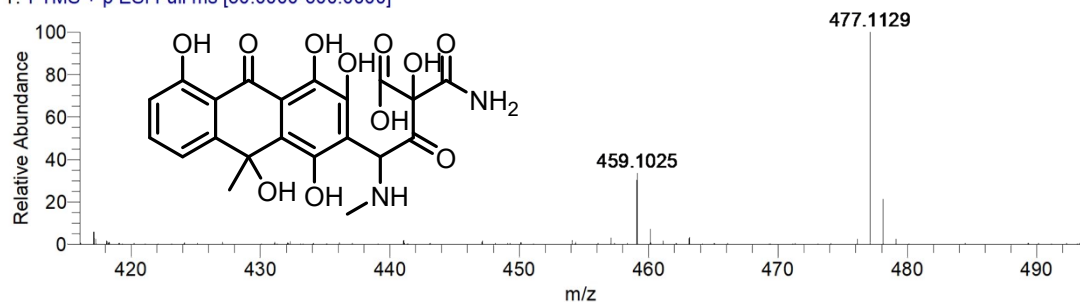
18

sample-A #4455 RT: 8.31 AV: 1 SB: 2 8.14 , 8.49 NL: 8.52E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



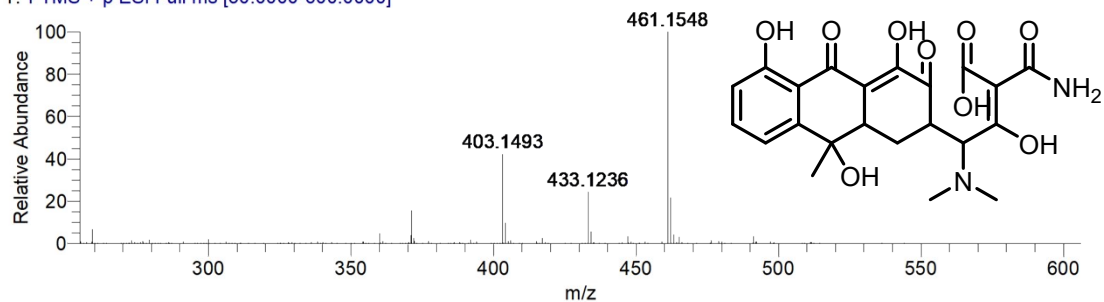
19

sample-A #4510 RT: 8.42 AV: 1 SB: 2 8.31 , 8.57 NL: 7.35E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



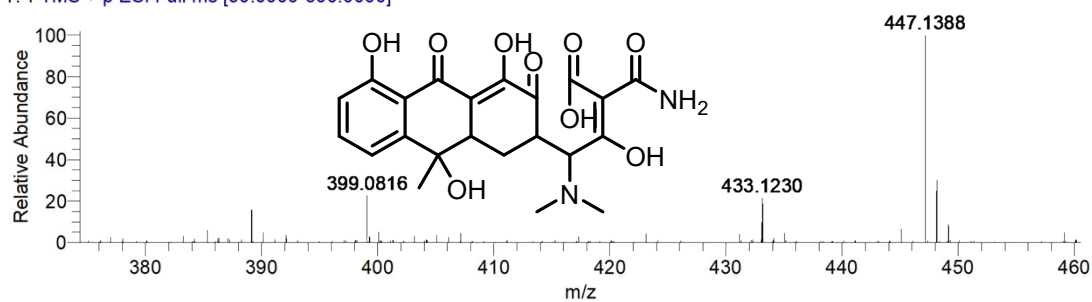
20

sample-A #4702 RT: 8.79 AV: 1 SB: 2 8.68 , 9.21 NL: 2.16E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



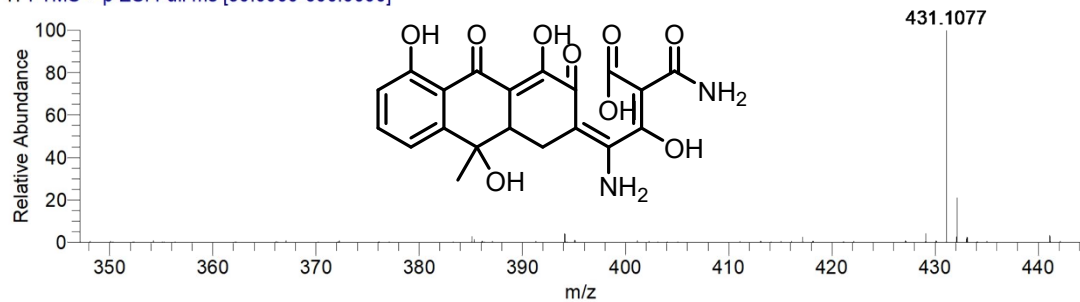
21

sample-A #4788 RT: 8.95 AV: 1 SB: 1 9.19 NL: 7.75E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



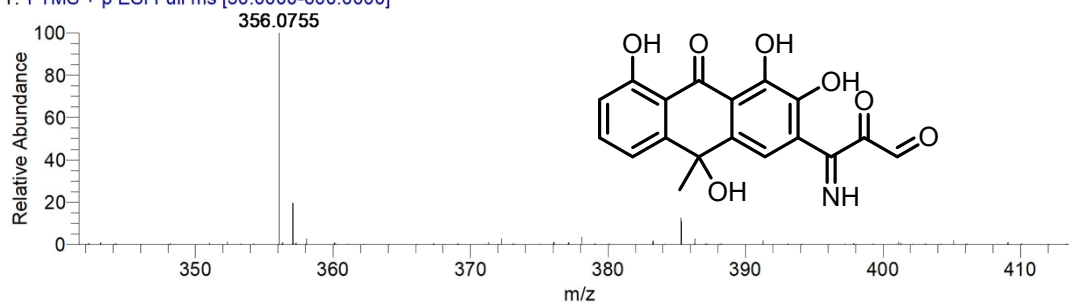
22

sample-A #4909 RT: 9.17 AV: 1 SB: 1 9.29 NL: 1.23E7
T: FTMS + p ESI Full ms [50.0000-600.0000]



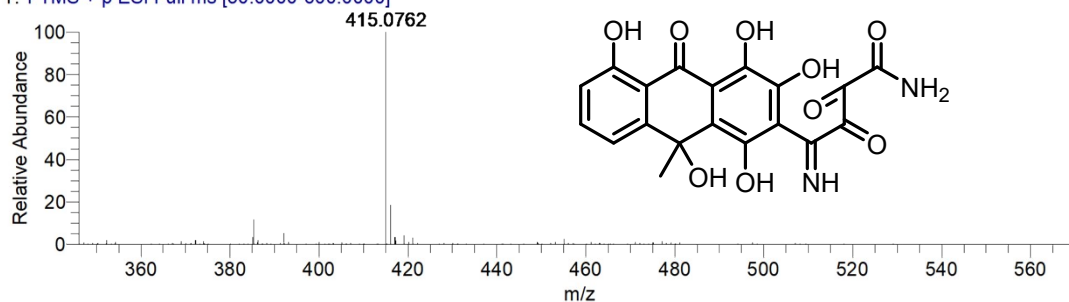
23

sample-A #4026 RT: 7.50 AV: 1 SB: 2 7.36 , 7.59 NL: 8.95E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



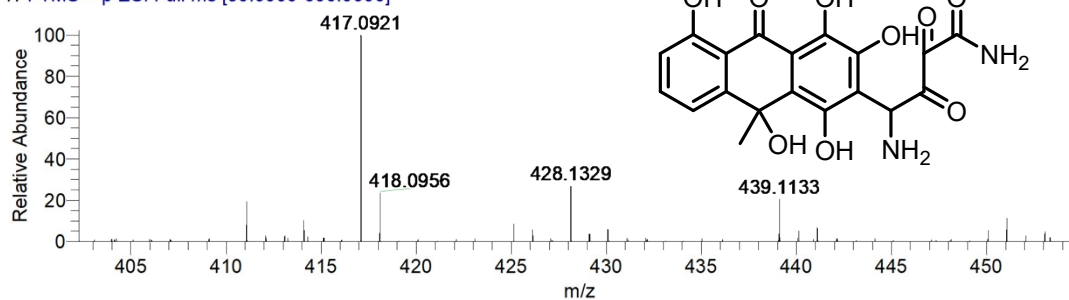
24

sample-A #4352 RT: 8.10 AV: 1 SB: 2 7.36 , 7.59 NL: 2.18E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



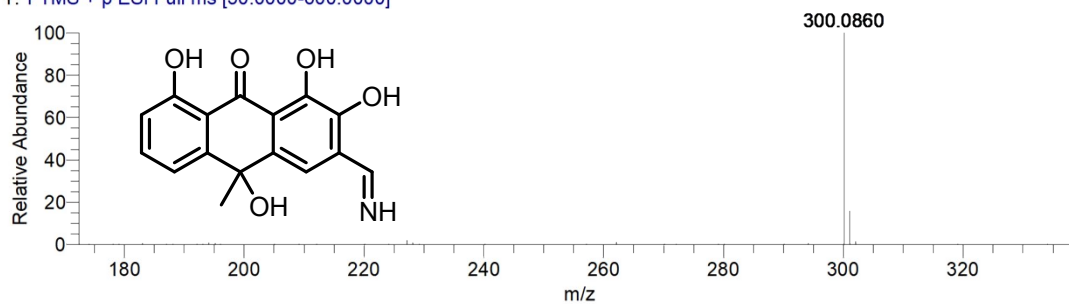
25

sample-A #5442 RT: 10.12 AV: 1 SB: 2 10.04 , 10.21 NL: 4.75E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



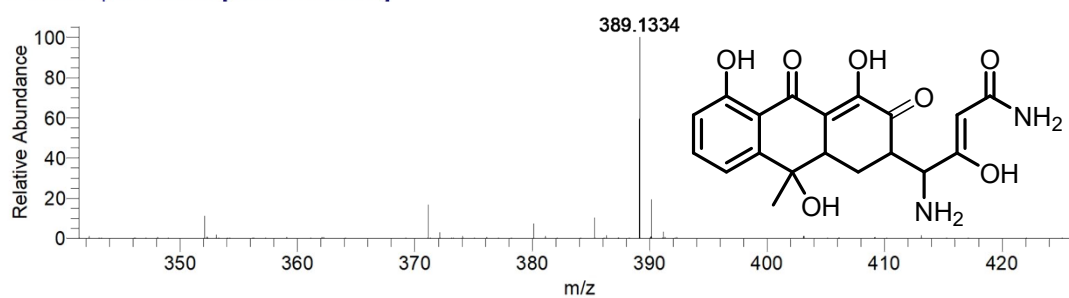
26

sample-A #4576 RT: 8.55 AV: 1 SB: 2 8.44 , 8.72 NL: 6.37E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



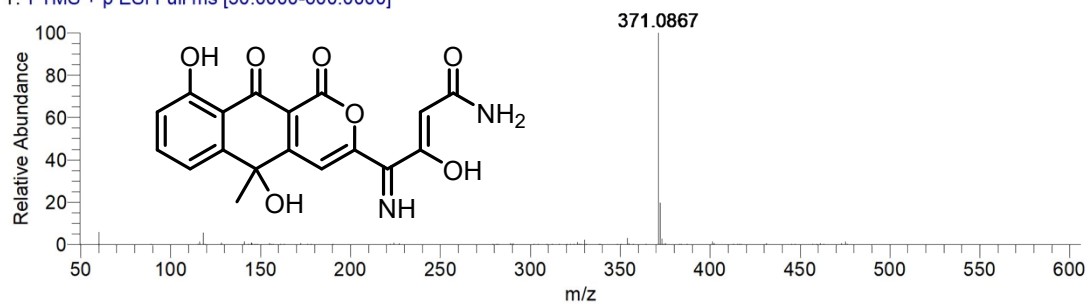
27

sample-A #4585 RT: 8.57 AV: 1 SB: 2 8.48 , 8.82 NL: 1.90E6
T: FTMS + p ESI Full ms [50.0000-600.0000]



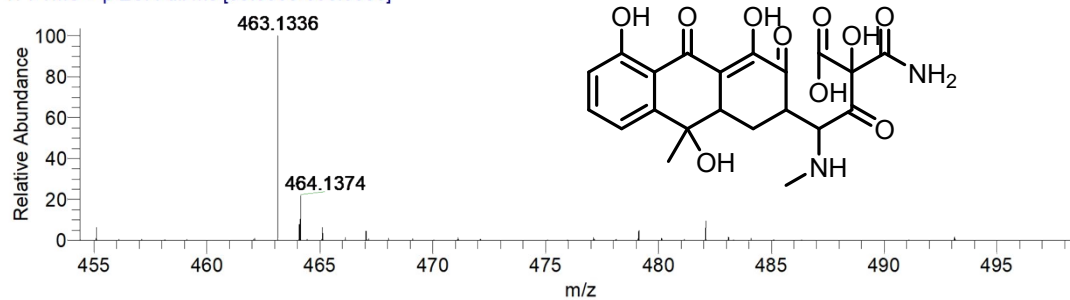
28

sample-A #5107 RT: 9.52 AV: 1 SB: 2 8.48 , 8.82 NL: 5.93E7
T: FTMS + p ESI Full ms [50.0000-600.0000]



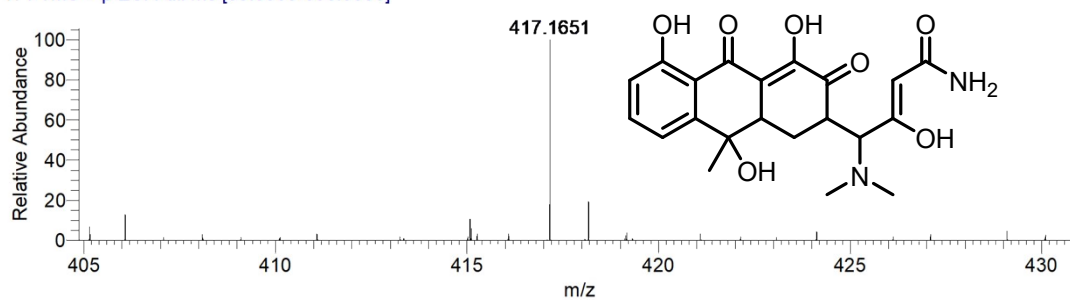
29

sample-A #3771 RT: 7.01 AV: 1 SB: 1 6.80 NL: 8.41E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



30

sample-A #4716 RT: 8.82 AV: 1 SB: 2 8.74 , 8.95 NL: 2.72E5
T: FTMS + p ESI Full ms [50.0000-600.0000]



31

32