

Supporting Information

***Barbeya oleoides* leaves extracts: *In vitro* carbohydrate digestive enzymes inhibition and phytochemical characterization**

Alaa A. Khojah ^{1,3,*}, Guillermo F. Padilla-González ², Ammar Bader ³, Monique J. S. Simmonds ², Michael Munday ¹, Michael Heinrich ^{1,*}

¹ UCL School of Pharmacy, University College London, London WC1N 1AX, UK; michael.munday@ucl.ac.uk (M.M.)

² Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB, UK; m.Simmonds@kew.org (M.S.J.S.); f.padilla@kew.org (G.F.P.)

³ Department of Pharmacognosy, Faculty of Pharmacy, Umm Al-Qura University, Makkah 21955, Saudi Arabia; ambader@uqu.edu.sa (A.B.)

* Correspondence: a.khojah@ucl.ac.uk (A.K.); m.heinrich@ucl.ac.uk (M.H.)

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Figure S1. MS² Spectral matching of compound 1 with Kew Library.

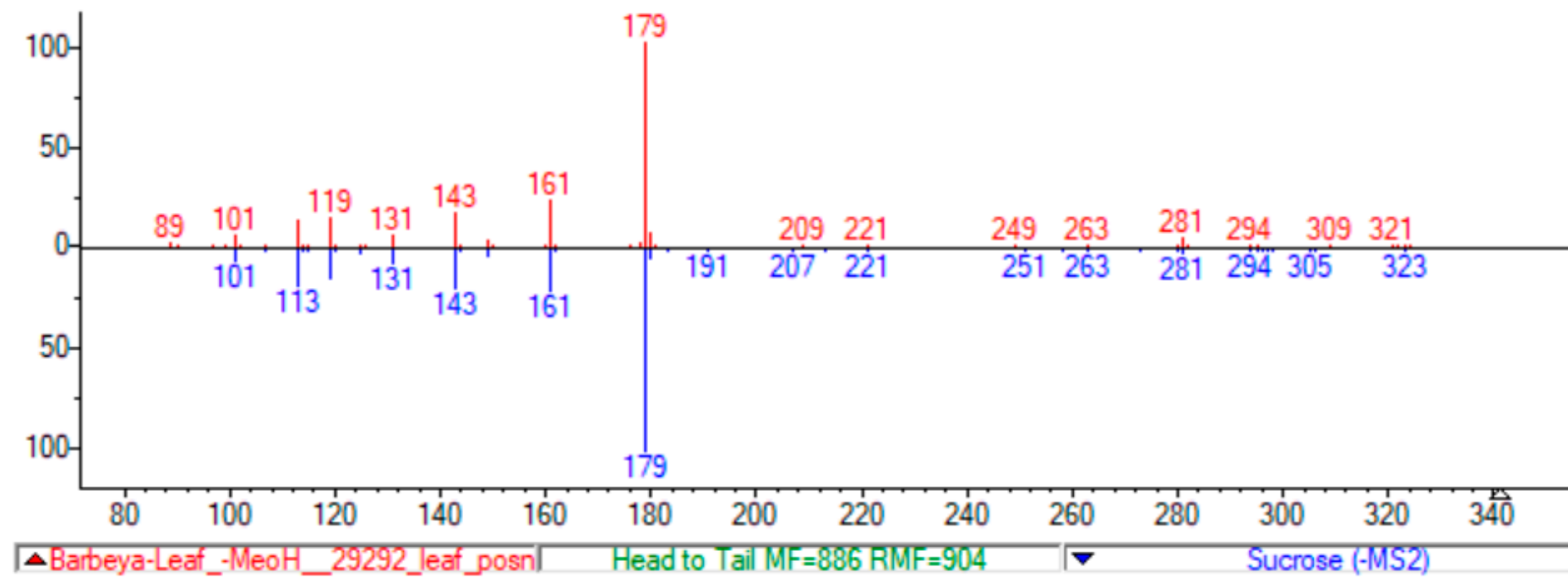


Figure S2. MS² spectrum of compound 2.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #531 RT: 1.80 AV: 1 NL: 6.01E5
F: ITMS - c ESI r d Full ms2 481.0626@cid35.00 [127.0000-492.0000]

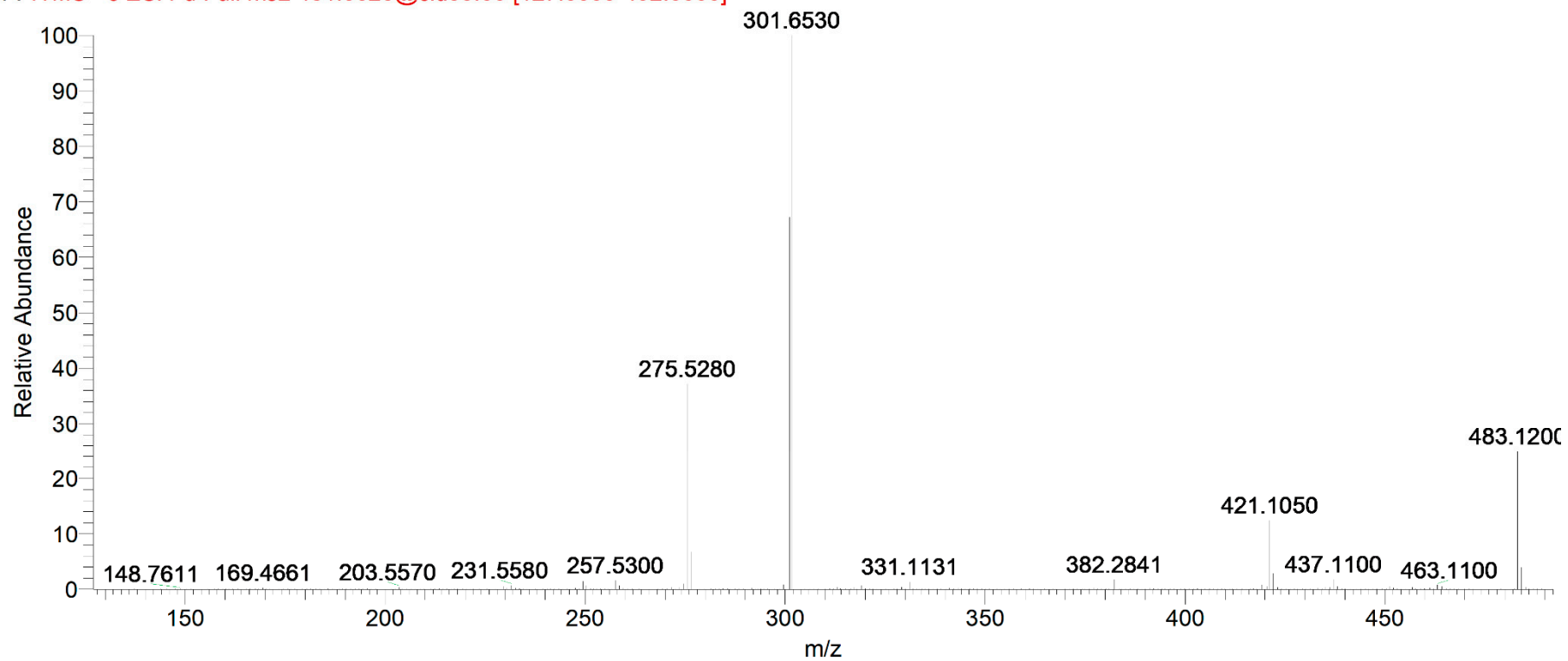


Figure S3. MS² spectrum of compound 3.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #725 RT: 2.31 AV: 1 NL: 2.91E4
F: ITMS - c ESI r d Full ms2 481.0617@cid35.00 [127.0000-492.0000]

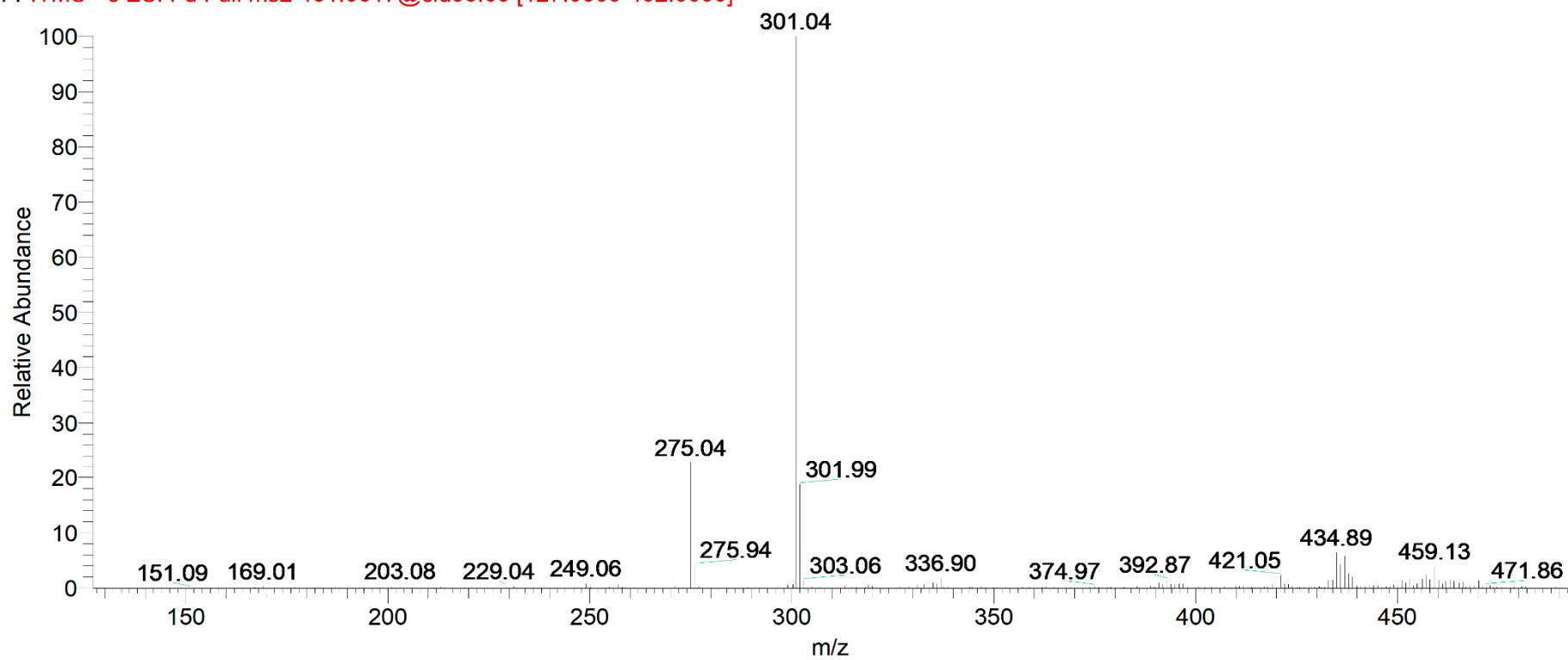


Figure S4. MS³ Spectral matching of compound 3 with MS² Kew Library of ellagic acid.

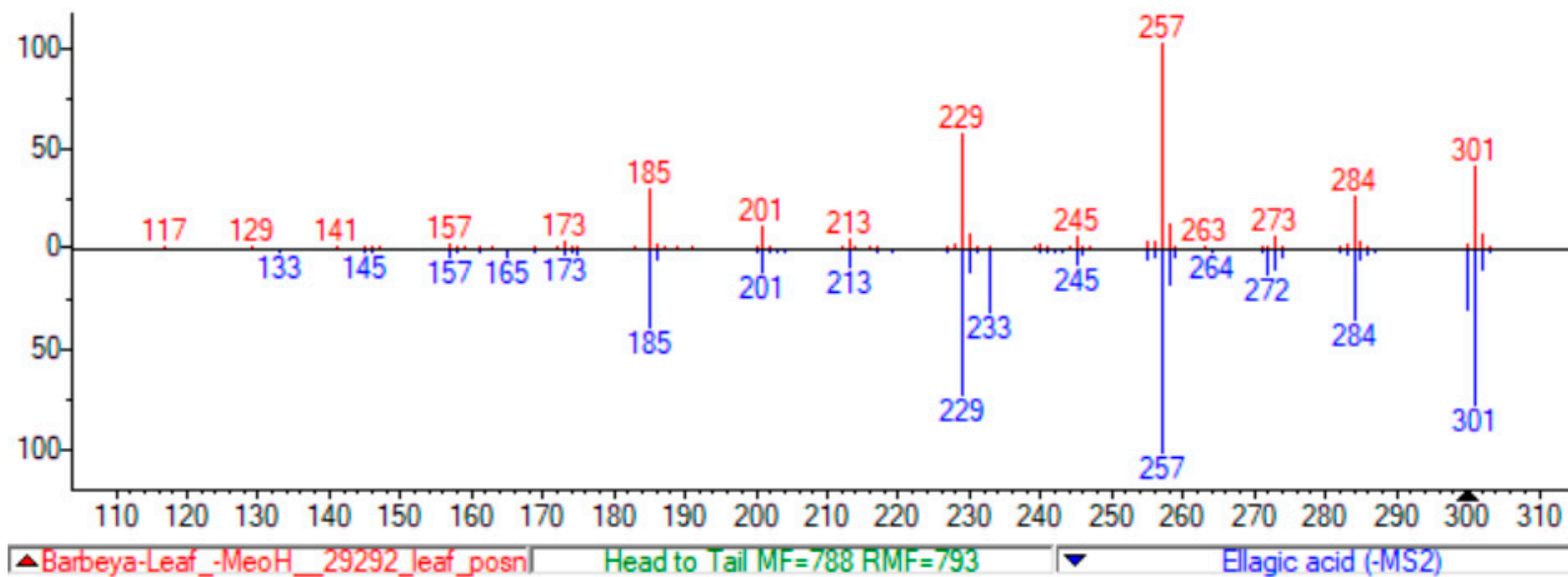


Figure S5. Proposed Fragmentation pattern of compounds 2 and 3.

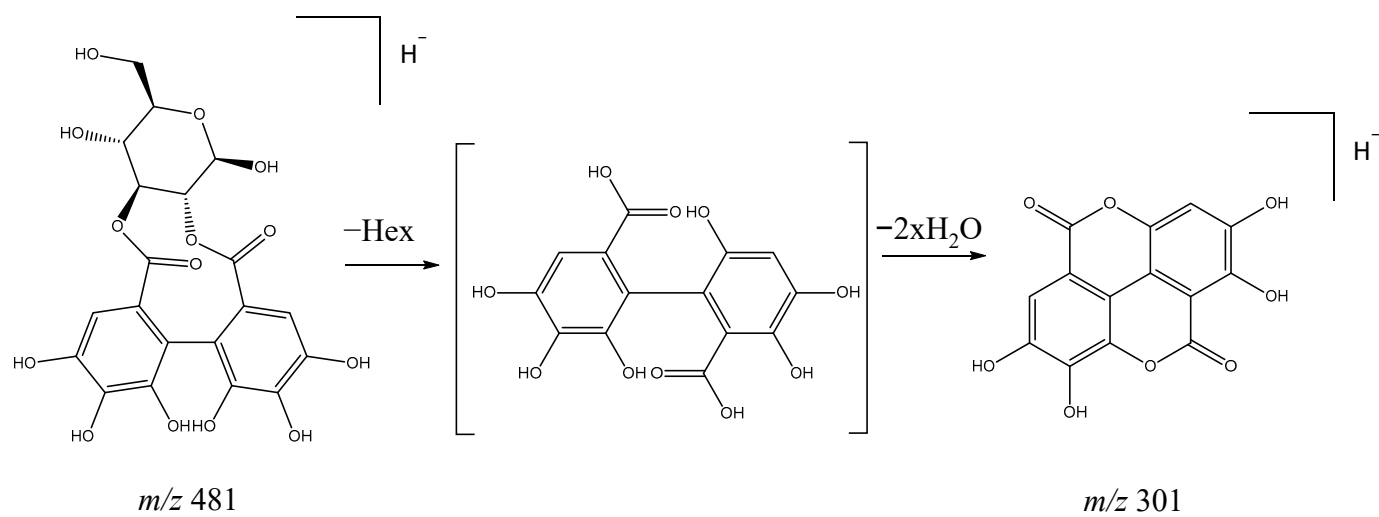


Figure S6. MS² spectrum of compound 4.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #788 RT: 2.50 AV: 1 NL: 3.23E5
F: ITMS - c ESI r d Full ms2 169.0137@cid35.00 [50.0000-180.0000]

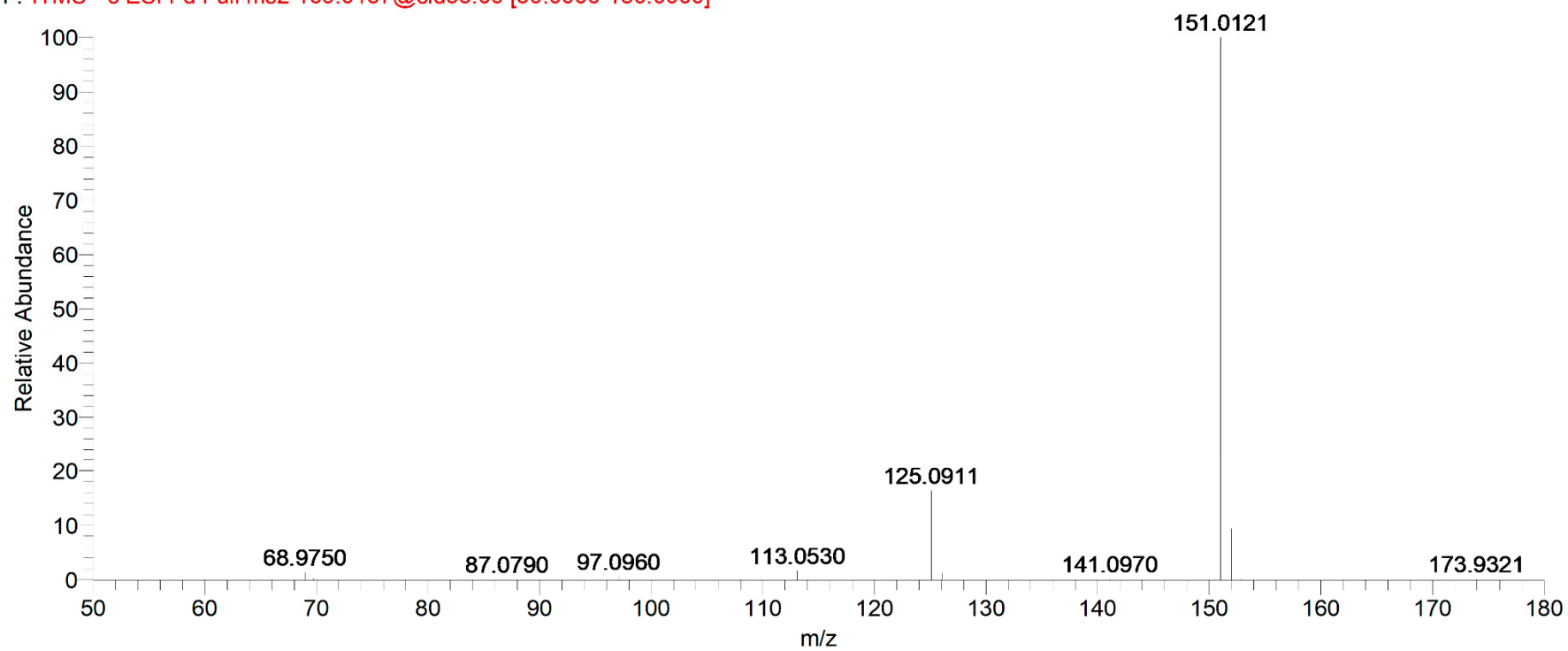


Figure S7. MS² spectrum of compound 5.

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #939 RT: 2.93 AV: 1 NL: 3.30E5

F: ITMS - c ESI r d Full ms2 169.0137@cid35.00 [50.0000-180.0000]

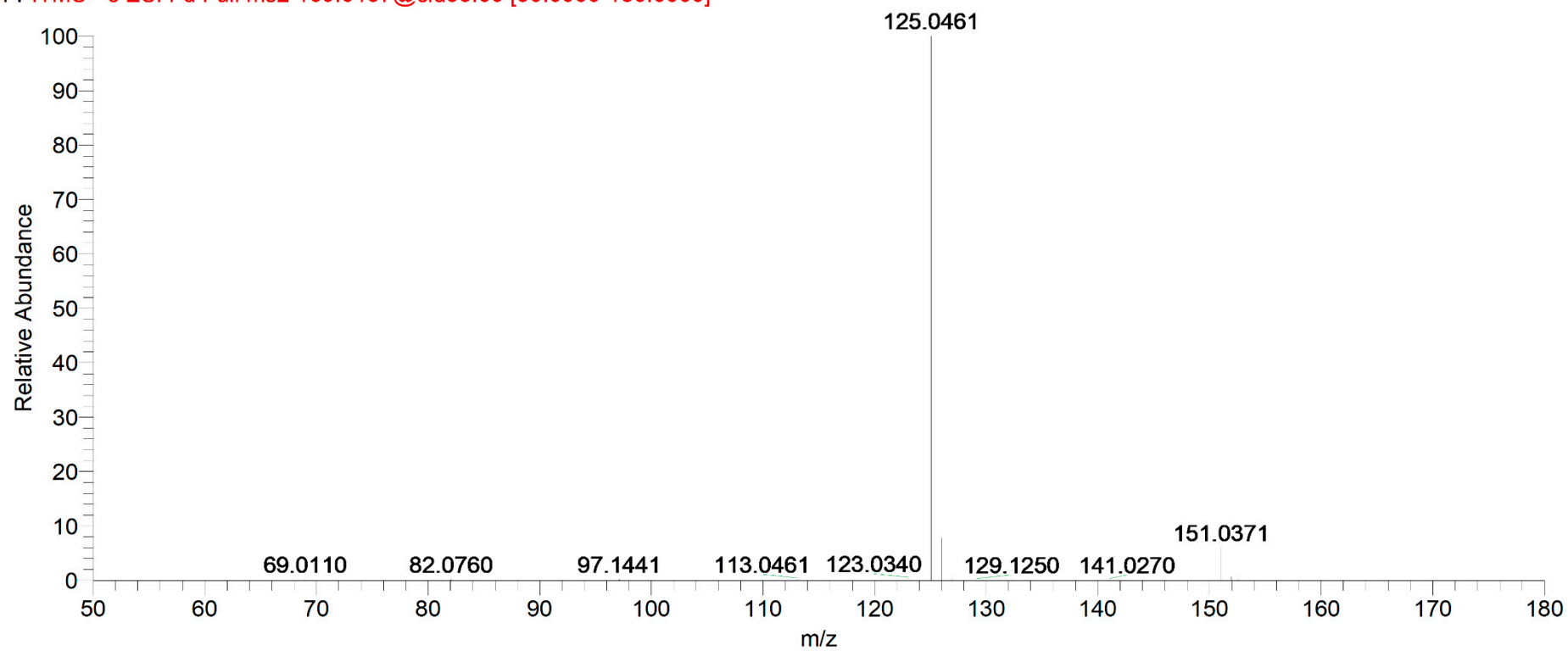


Figure S8. MS² spectrum of compound 6.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #2101 RT: 6.27 AV: 1 NL: 6.25E4
F: ITMS - c ESI r d Full ms2 1067.1191@cid35.00 [288.0000-1078.0000]

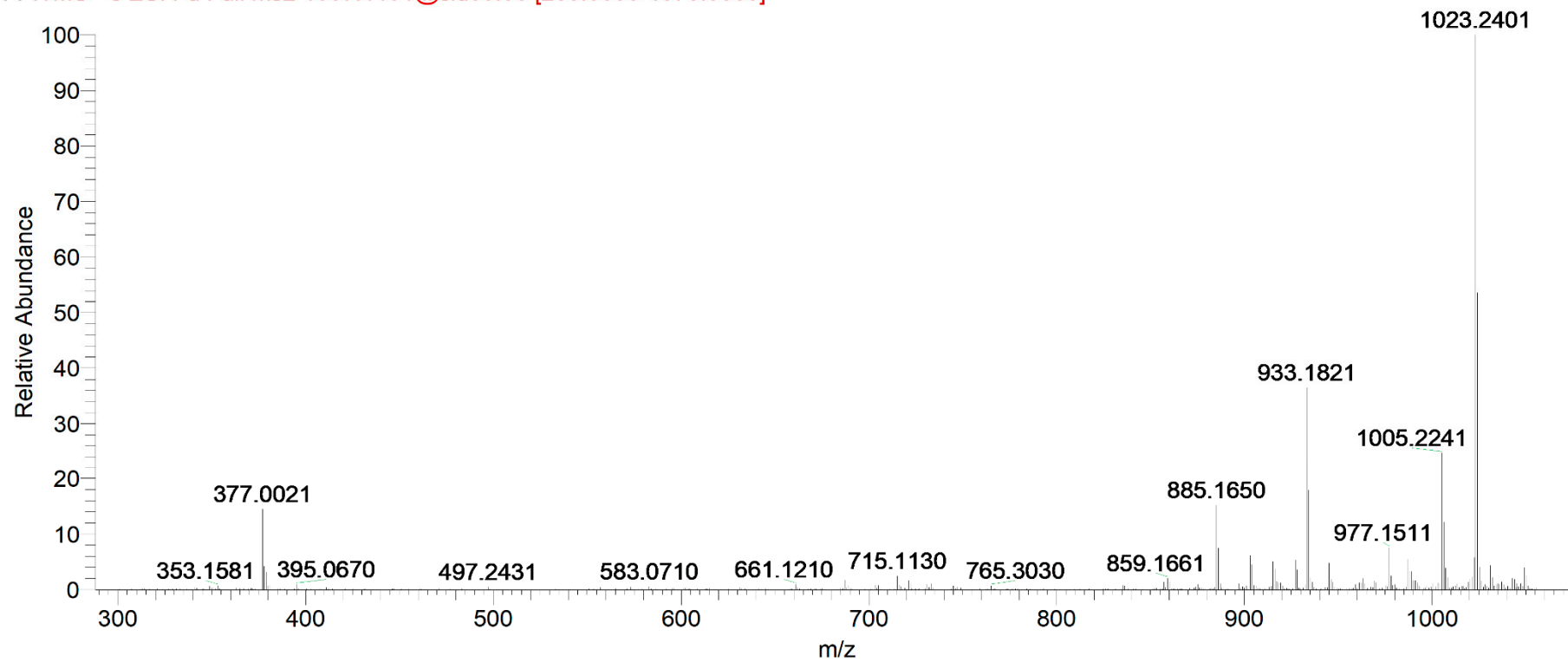


Figure S9. MS² spectrum of compound 7.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #2510 RT: 7.35 AV: 1 NL: 1.26E6
F: ITMS - c ESI r d Full ms2 633.0715@cid35.00 [169.0000-644.0000]

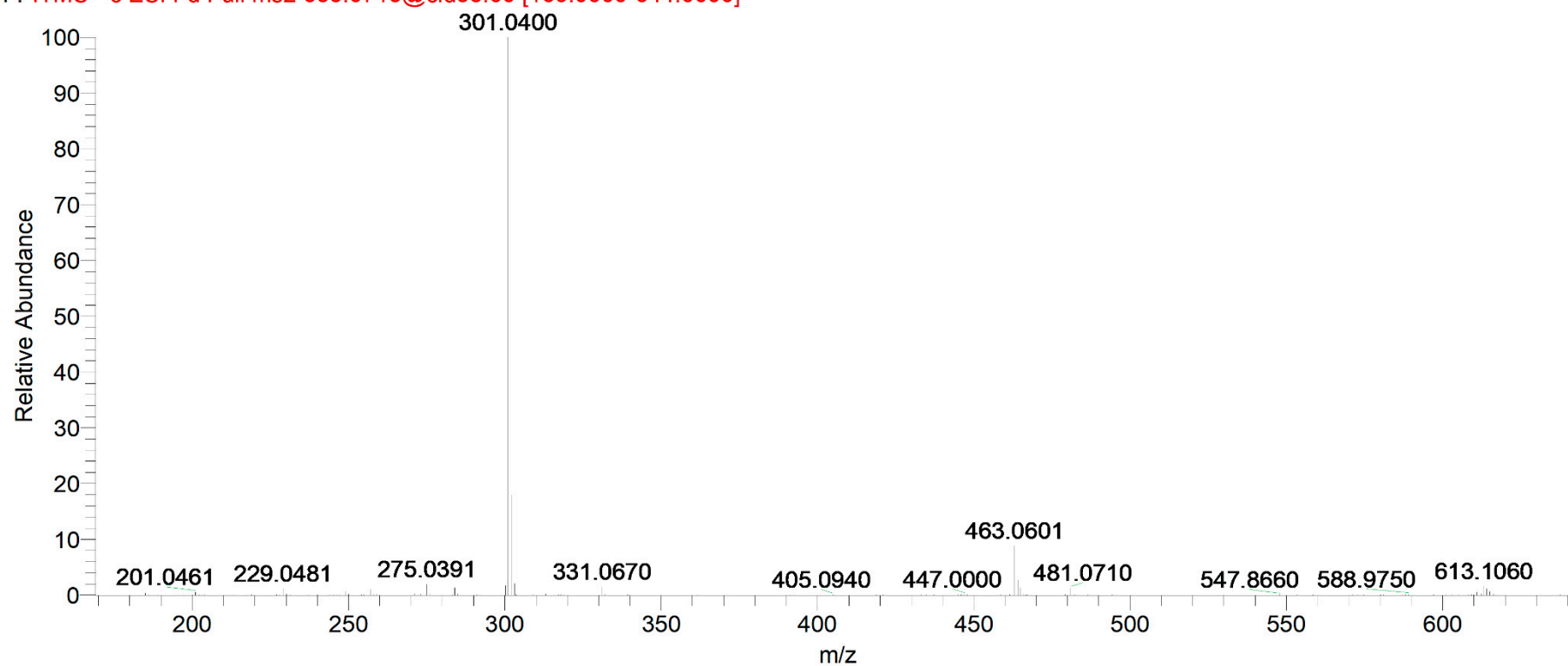


Figure S10. MS² spectrum of compound 8.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #2654 RT: 7.71 AV: 1 NL: 3.74E5
F: ITMS - c ESI r d Full ms2 935.0762@cid35.00 [252.0000-946.0000]

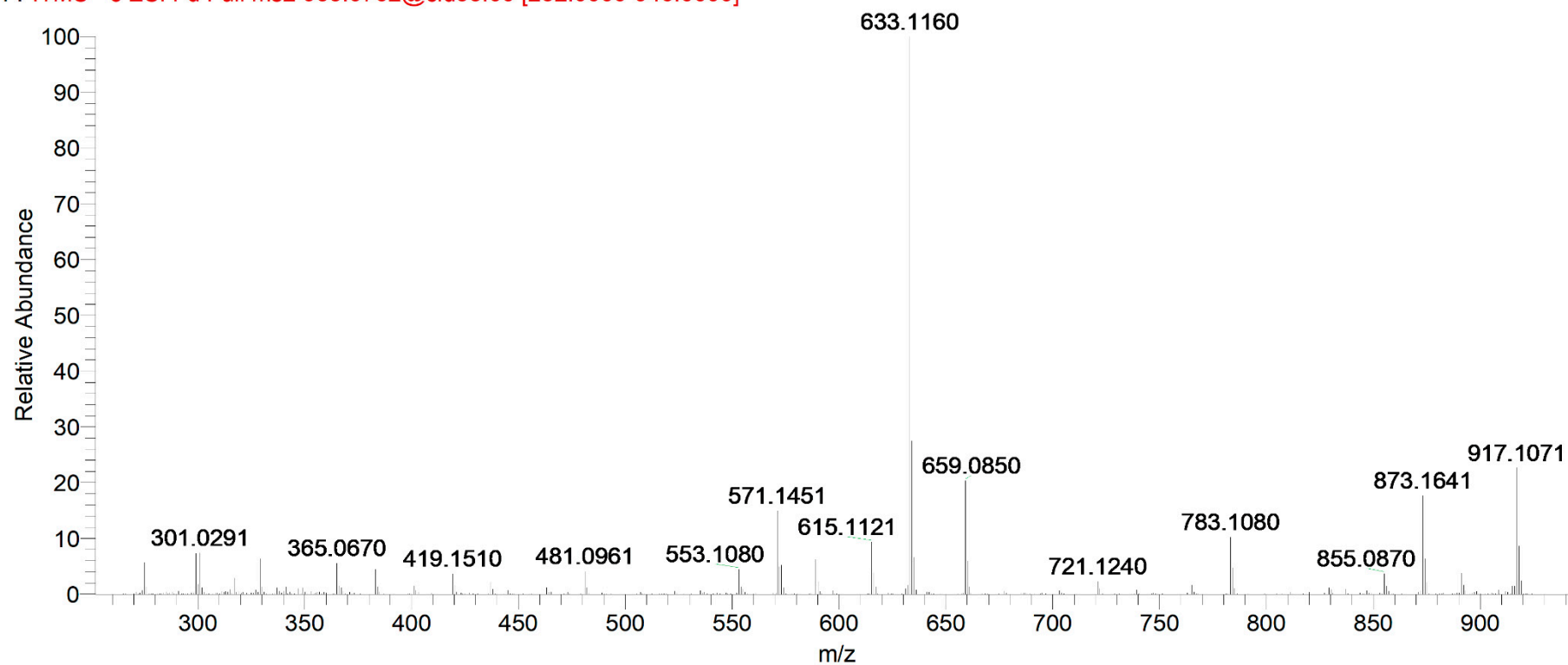


Figure S11. MS² spectrum of compound 9.

Barbeya-Leaf_-MeoH__29292_leaf_posnegESI_FT_MeOH60min #3099 RT: 8.93 AV: 1 NL: 5.63E5

F: ITMS - c ESI r d Full ms2 603.0678@cid35.00 [161.0000-1217.0000]

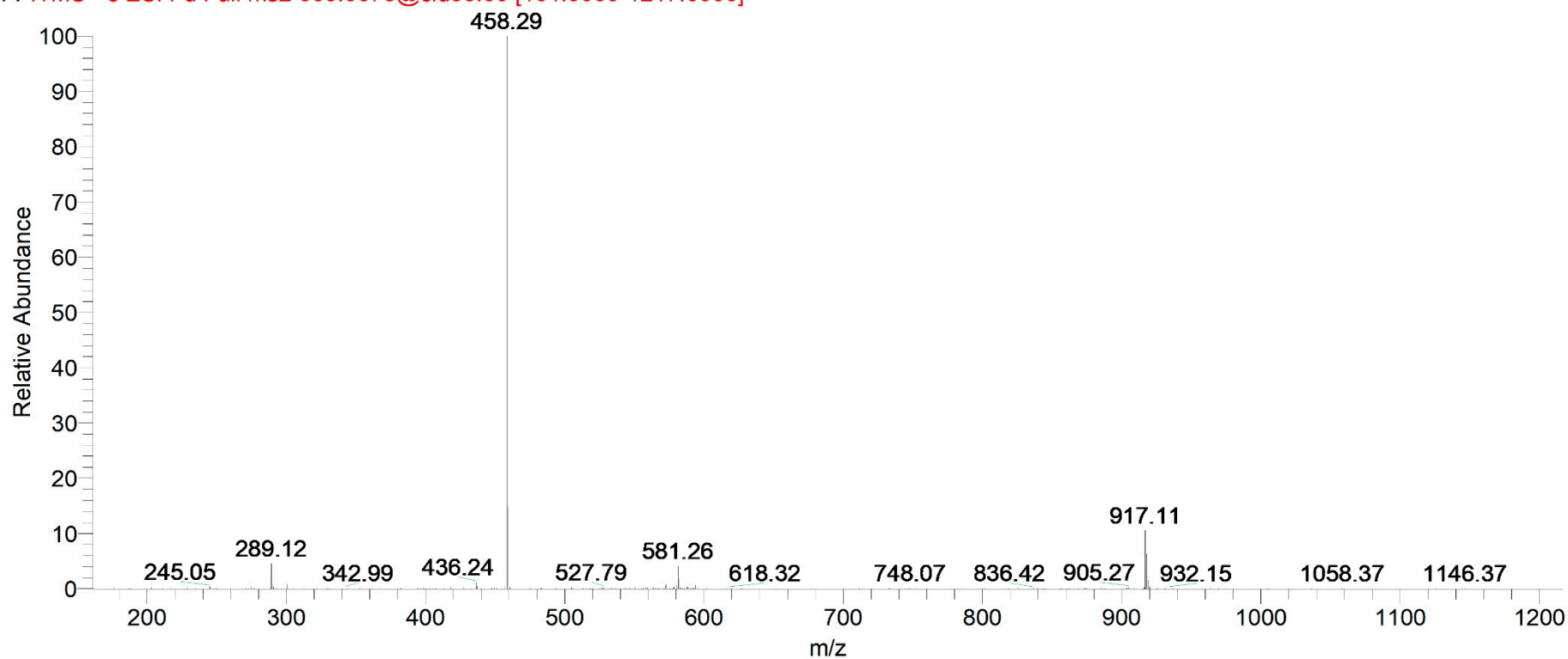


Figure S12. MS³ spectrum of compound 9.

Barbeya-Leaf_-MeoH_29292_leaf_posnegESI_FT_MeOH60min #3079 RT: 8.94 AV: 1 NL: 5.20E4
F: ITMS - c ESI r d Full ms3 603.0678@cid35.00 458.2851@cid35.00 [121.0000-927.0000]

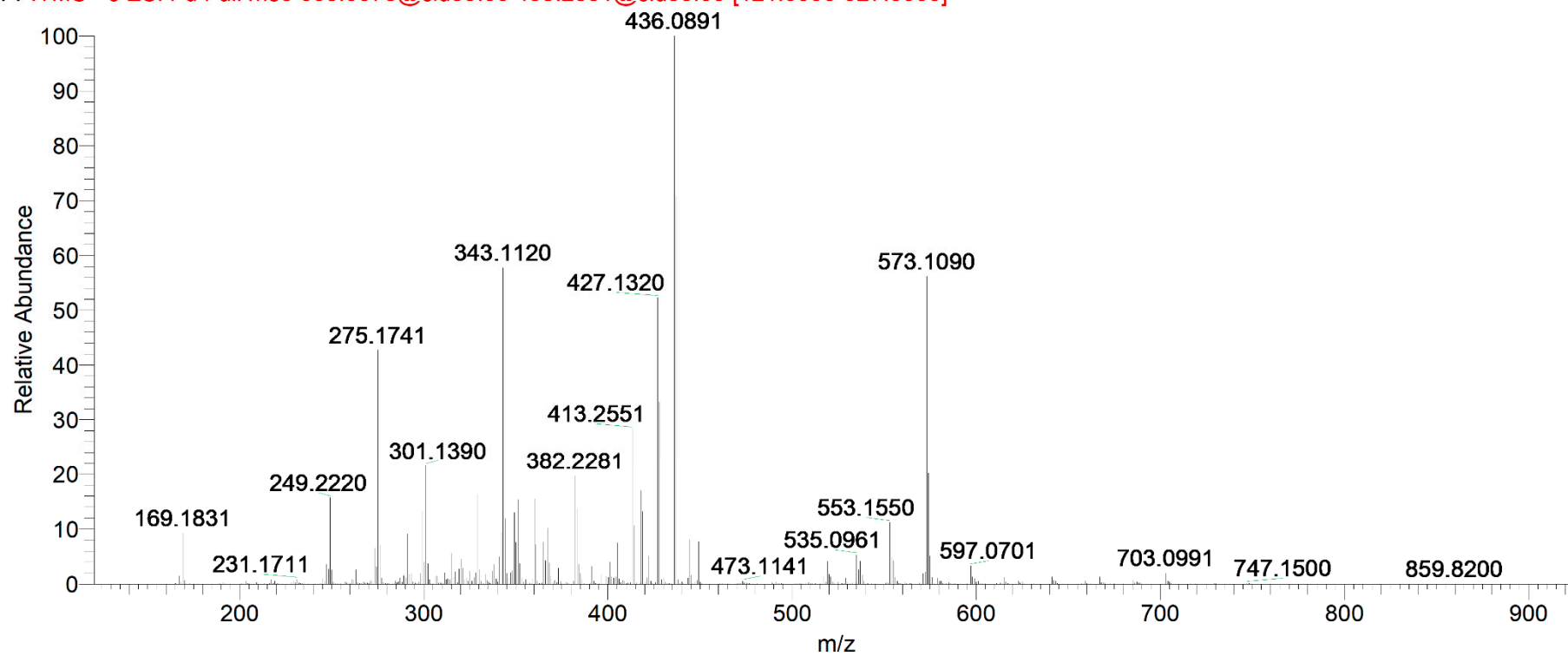


Figure S13. MS² spectrum of compound 10.

Barbeya-Leaf_-MeoH_29292_leaf_posnegESI_FT_MeOH60min #3900 RT: 11.41 AV: 1 NL: 6.53E4
F: ITMS - c ESI r d Full ms2 935.0756@cid35.00 [252.0000-946.0000]

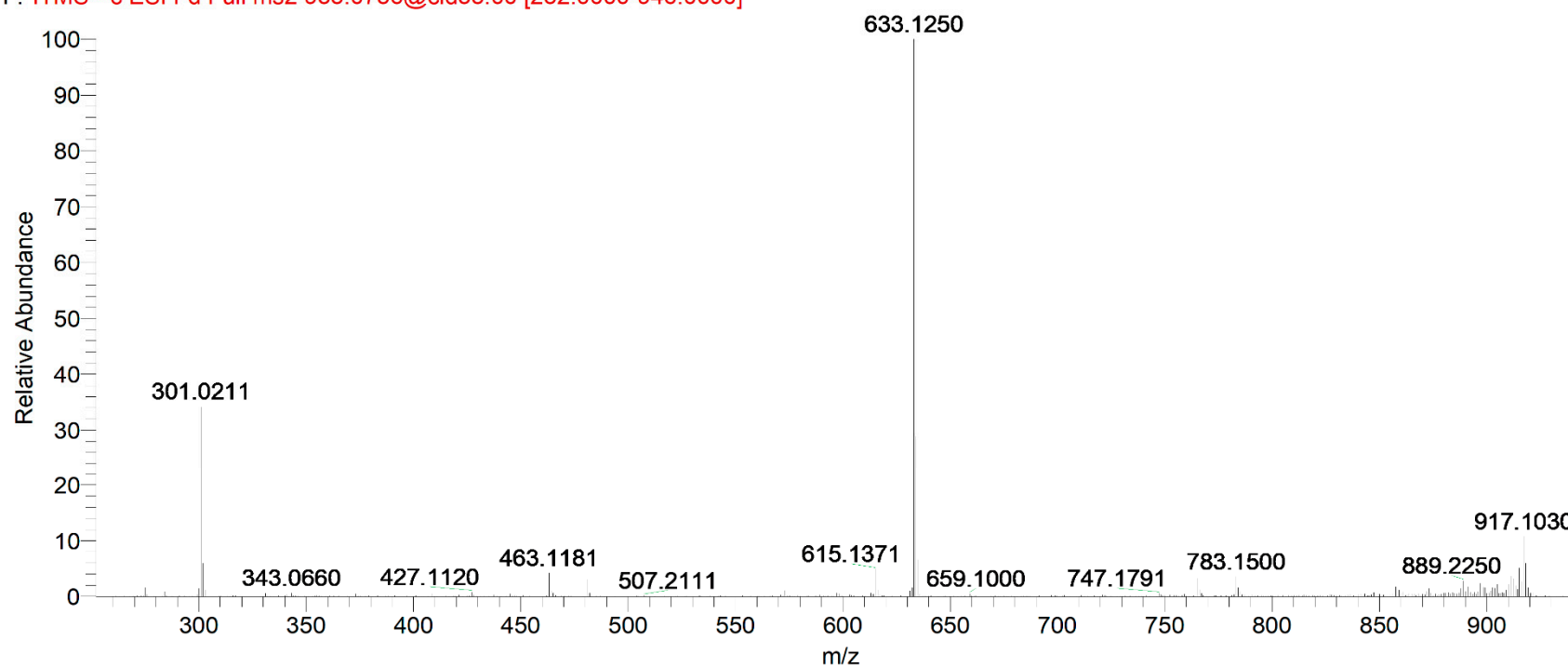


Figure S14. MS³ spectrum of compound 10

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #3902 RT: 11.41 AV: 1 NL: 3.84E4
F: ITMS - c ESI r d Full ms3 935.0764@cid35.00 633.1351@cid35.00 [169.0000-644.0000]

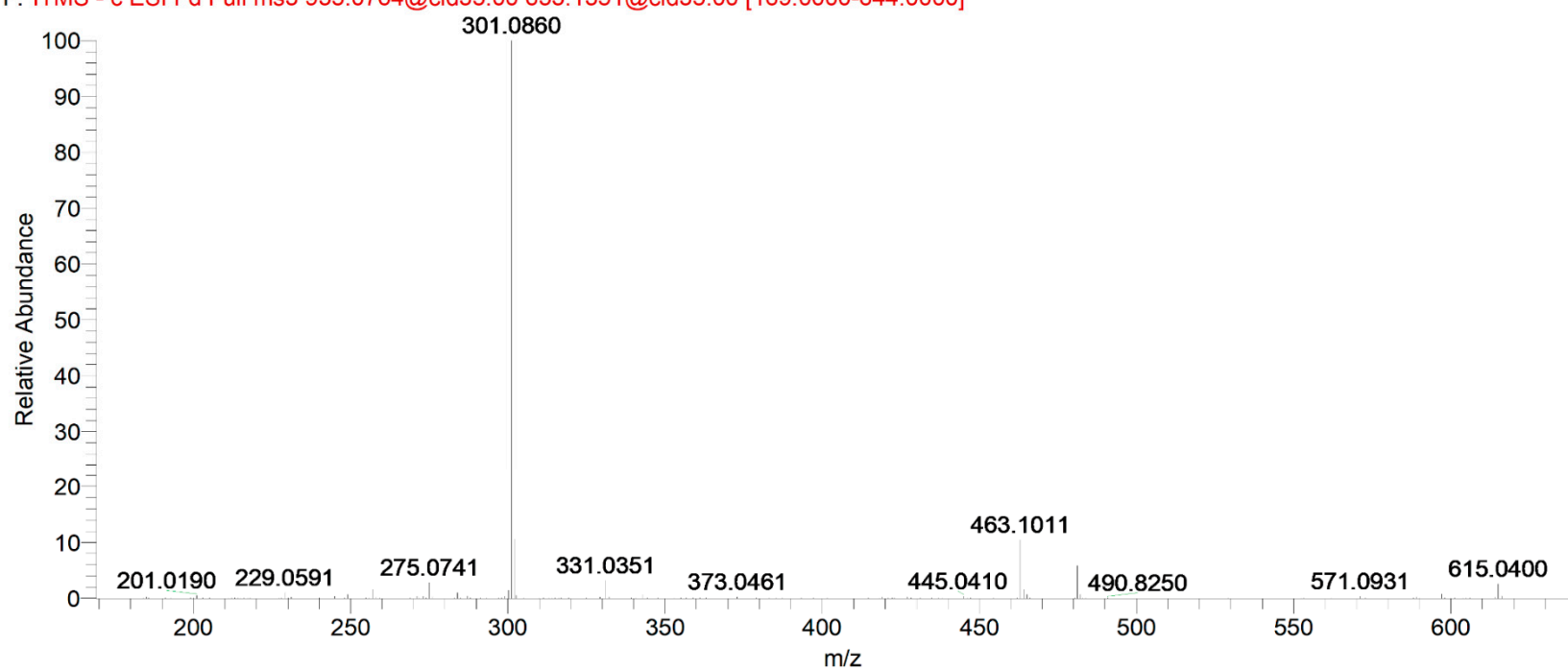


Figure S15. MS² spectrum of compound 11.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #4428 RT: 13.11 AV: 1 NL: 1.17E5
F: ITMS - c ESI r d Full ms2 631.0922@cid35.00 [168.0000-642.0000]

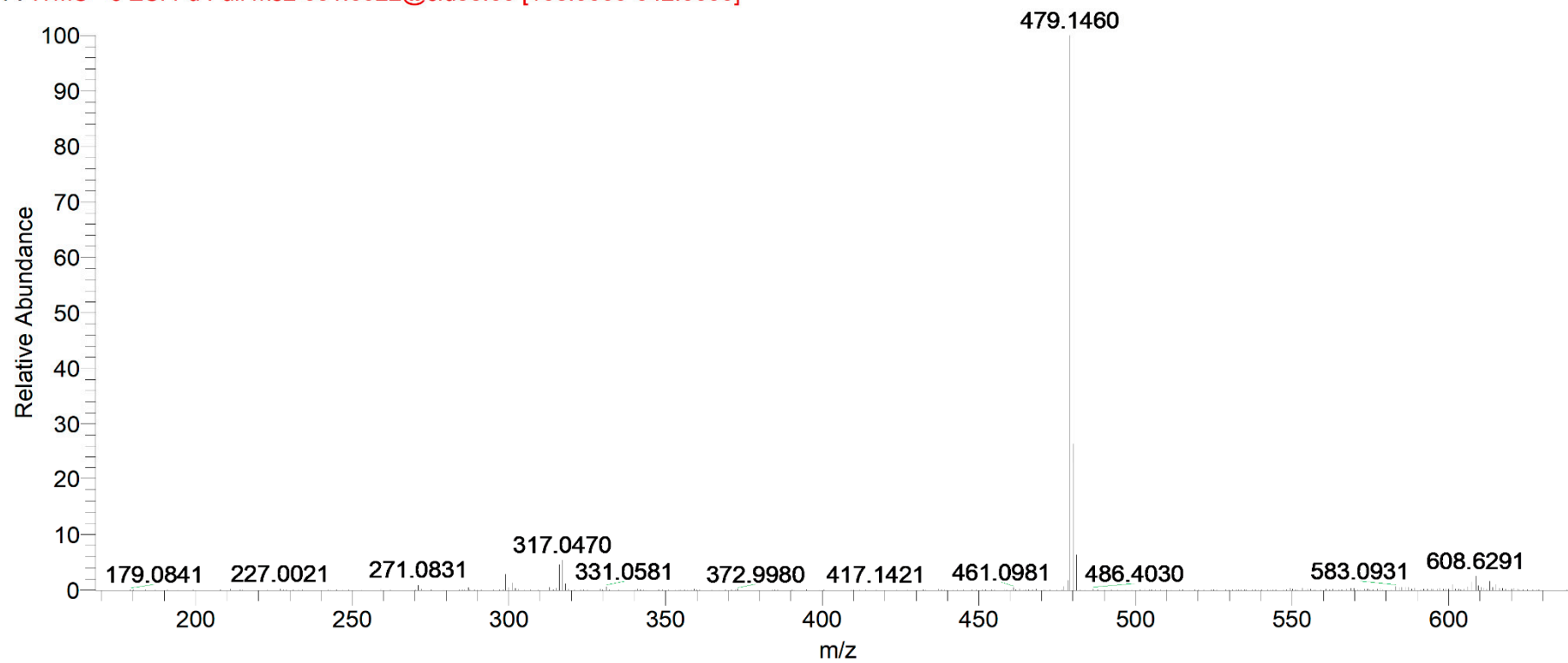


Figure S16. MS³ spectrum of compound 11.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #4431 RT: 13.11 AV: 1 NL: 7.91E3
F: ITMS - c ESI r d Full ms3 631.0916@cid35.00 317.0331@cid35.00 [82.0000-328.0000]

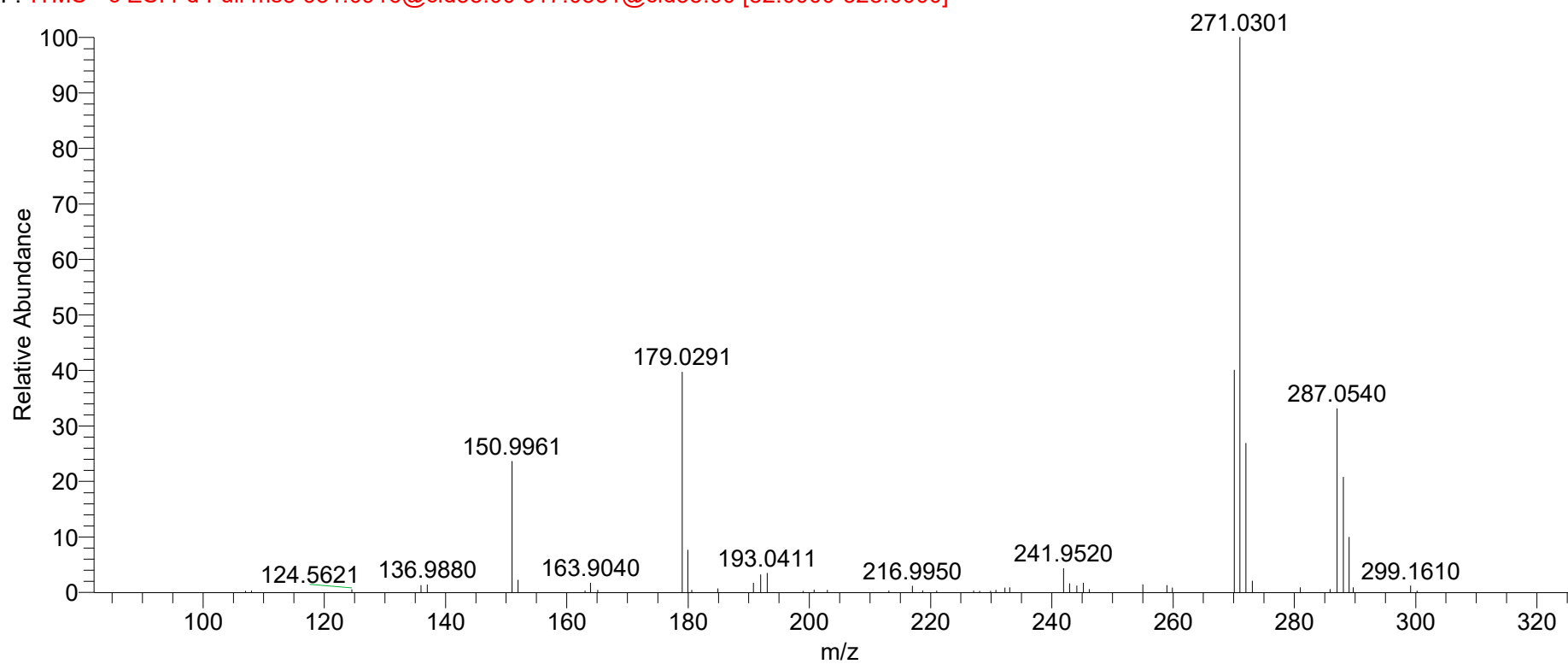


Figure S17. MS² spectrum of compound 12.

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #5044 RT: 15.07 AV: 1 NL: 2.20E5
F: ITMS - c ESI r d Full ms2 625.1389@cid35.00 [167.0000-636.0000]

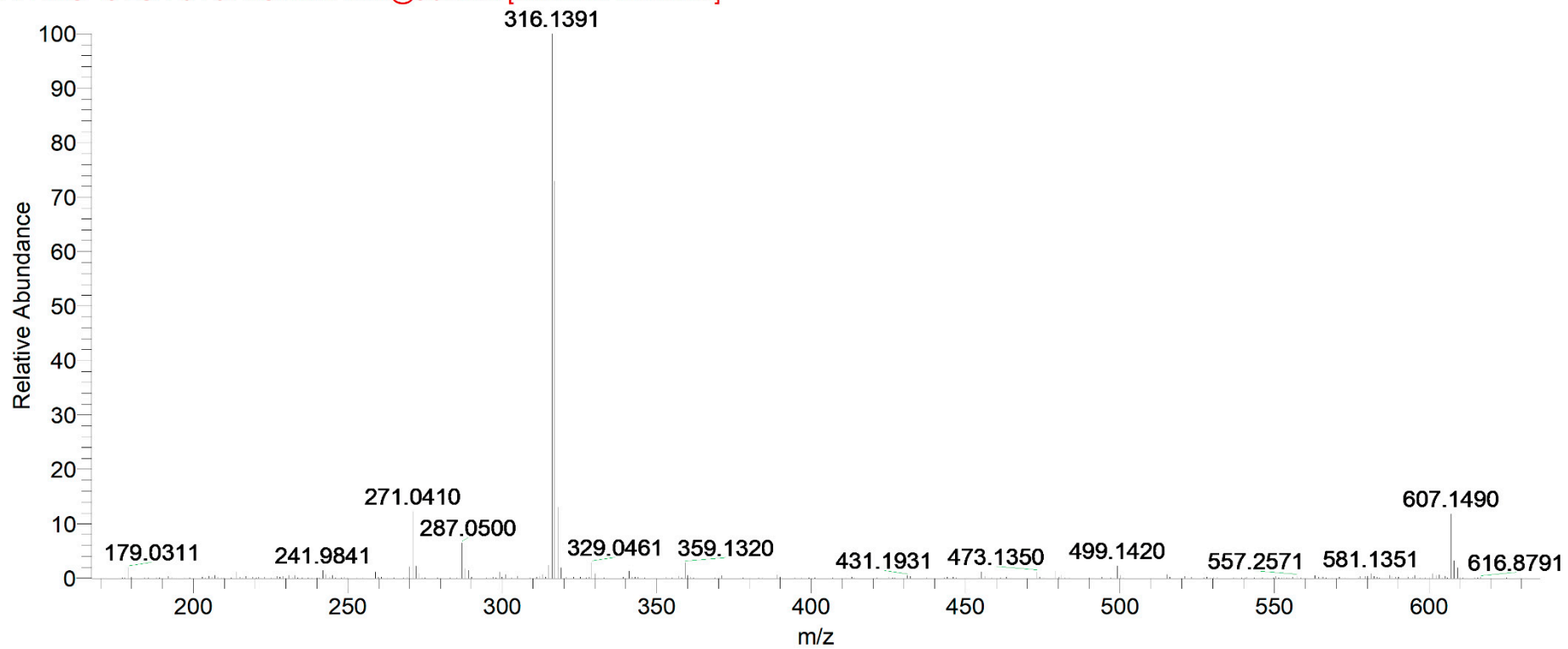


Figure S18. MS³ spectrum of compound 12.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5046 RT: 15.07 AV: 1 NL: 7.65E4
F: ITMS - c ESI r d Full ms3 625.1390@cid35.00 316.1391@cid35.00 [82.0000-327.0000]

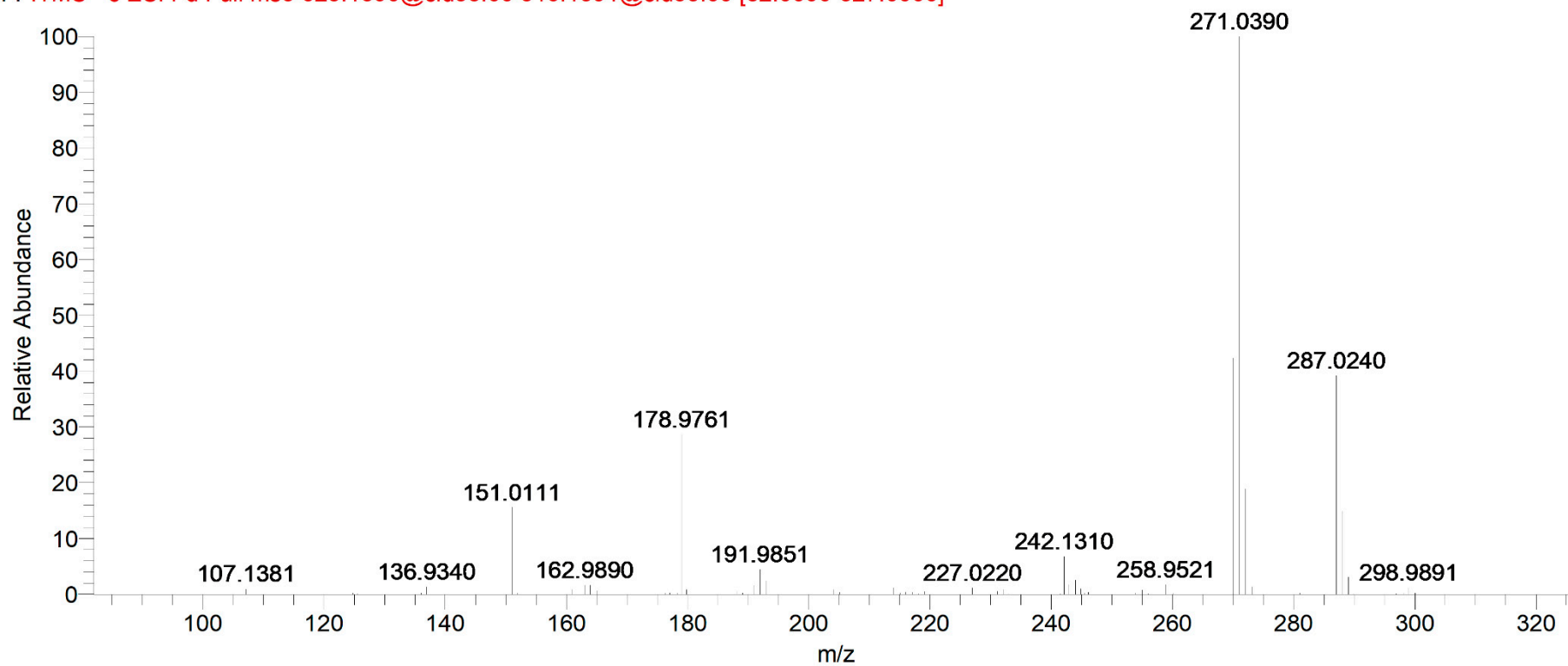


Figure S19. MS² spectrum of compound 13.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5166 RT: 15.41 AV: 1 NL: 2.55E5

F: ITMS - c ESI r d Full ms2 479.0824@cid35.00 [126.0000-490.0000]

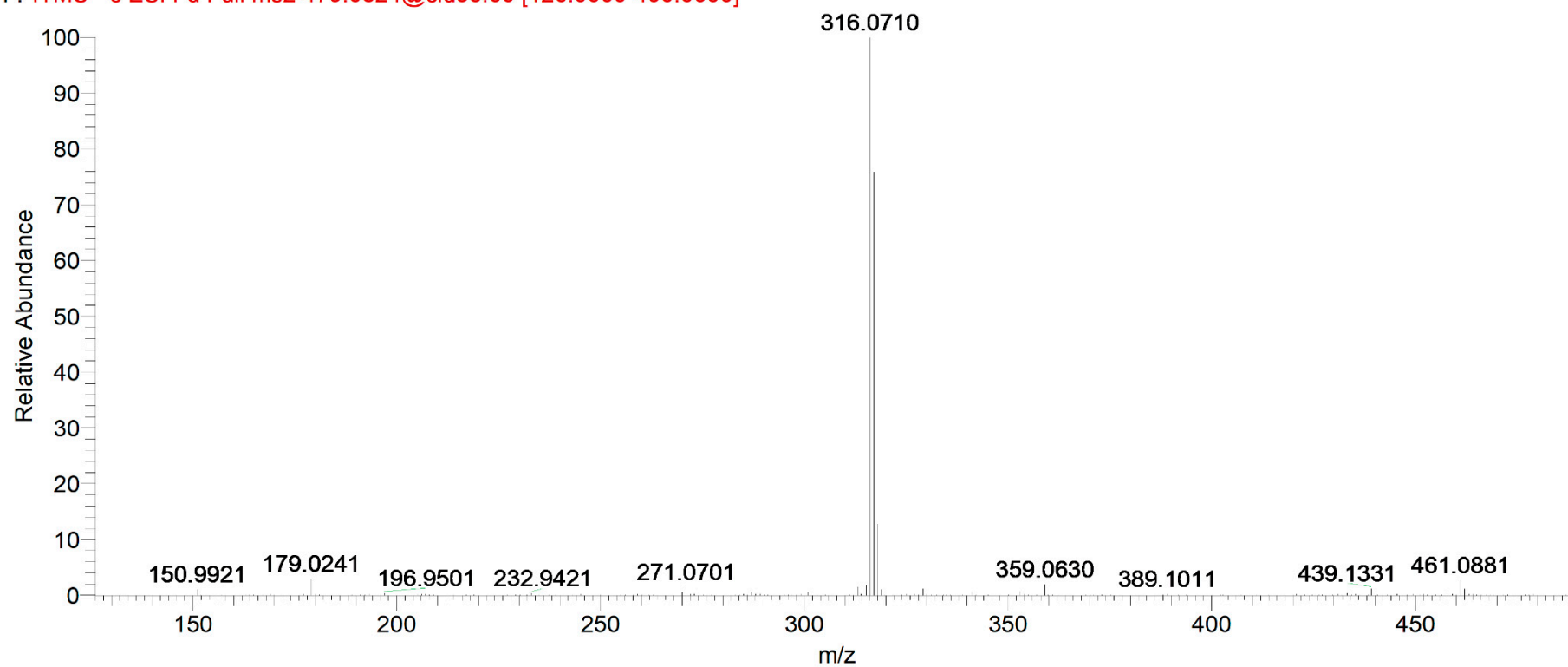


Figure S20. MS³ spectrum of compound 13.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5168 RT: 15.41 AV: 1 NL: 1.25E5
F: ITMS - c ESI r d Full ms3 479.0824@cid35.00 316.0710@cid35.00 [82.0000-327.0000]

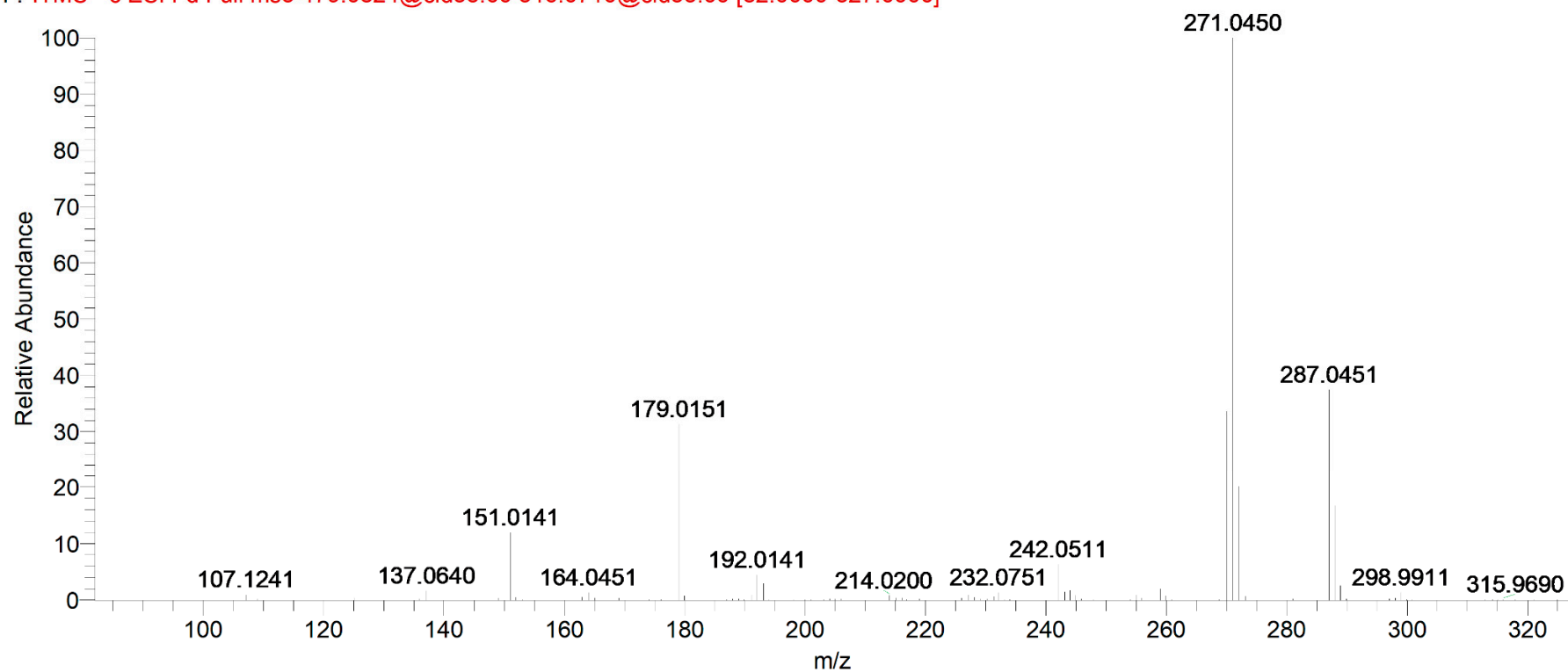


Figure S21. MS² spectrum of compound 14.

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #5720 RT: 17.18 AV: 1 NL: 6.80E5

F: ITMS - c ESI r d Full ms2 433.0399@cid35.00 [114.0000-444.0000]

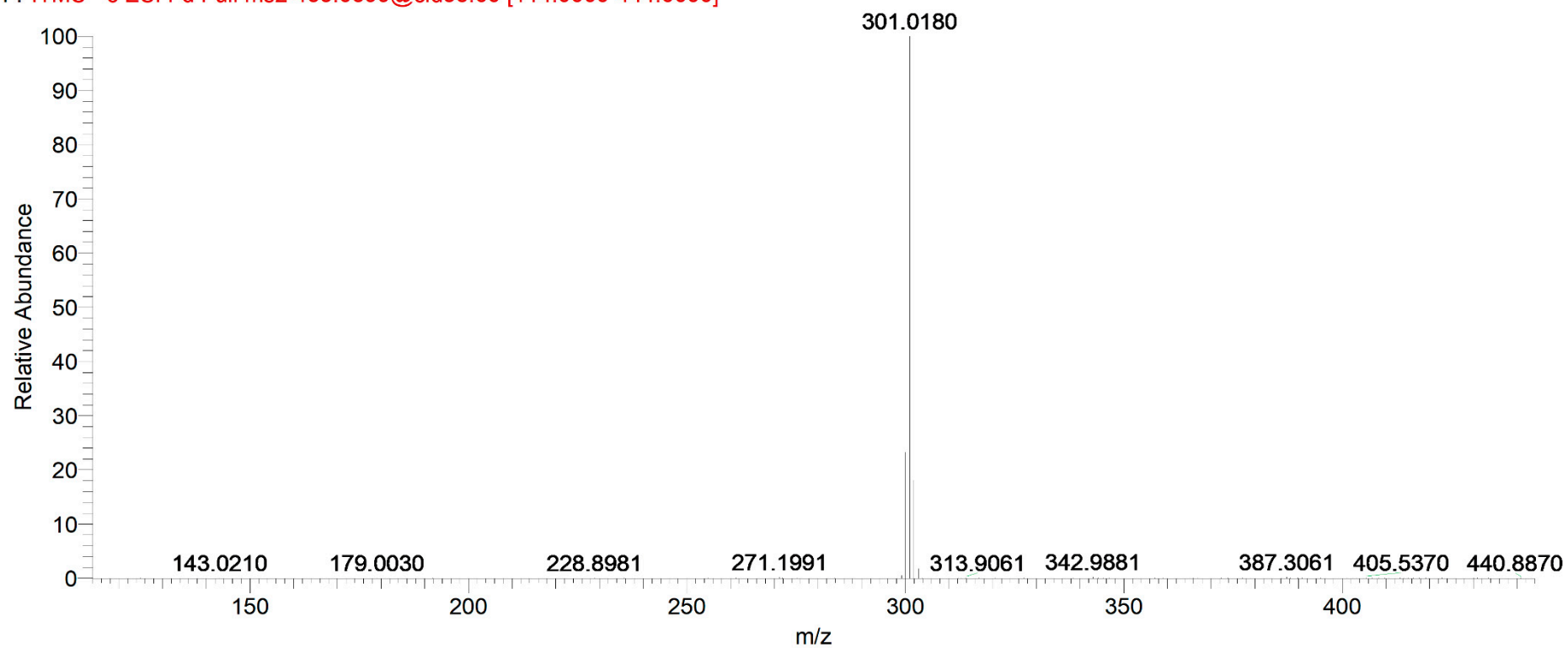


Figure S22. MS³ spectrum of compound 14.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5722 RT: 17.19 AV: 1 NL: 1.09E5
F: ITMS - c ESI r d Full ms3 433.0403@cid35.00 301.0180@cid35.00 [77.0000-312.0000]

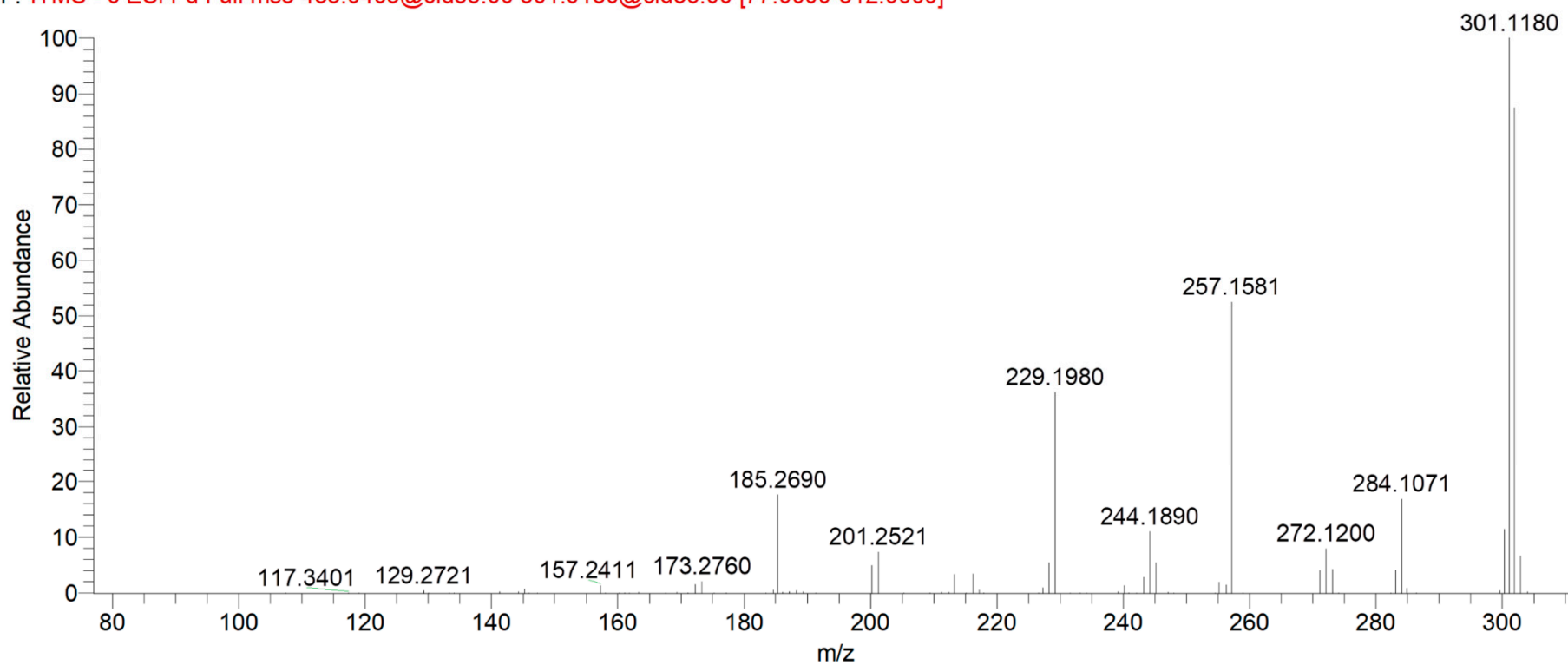


Figure S23. MS² spectrum of compound 15.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5890 RT: 17.68 AV: 1 NL: 6.03E5
F: ITMS - c ESI r d Full ms2 447.0559@cid35.00 [118.0000-458.0000]

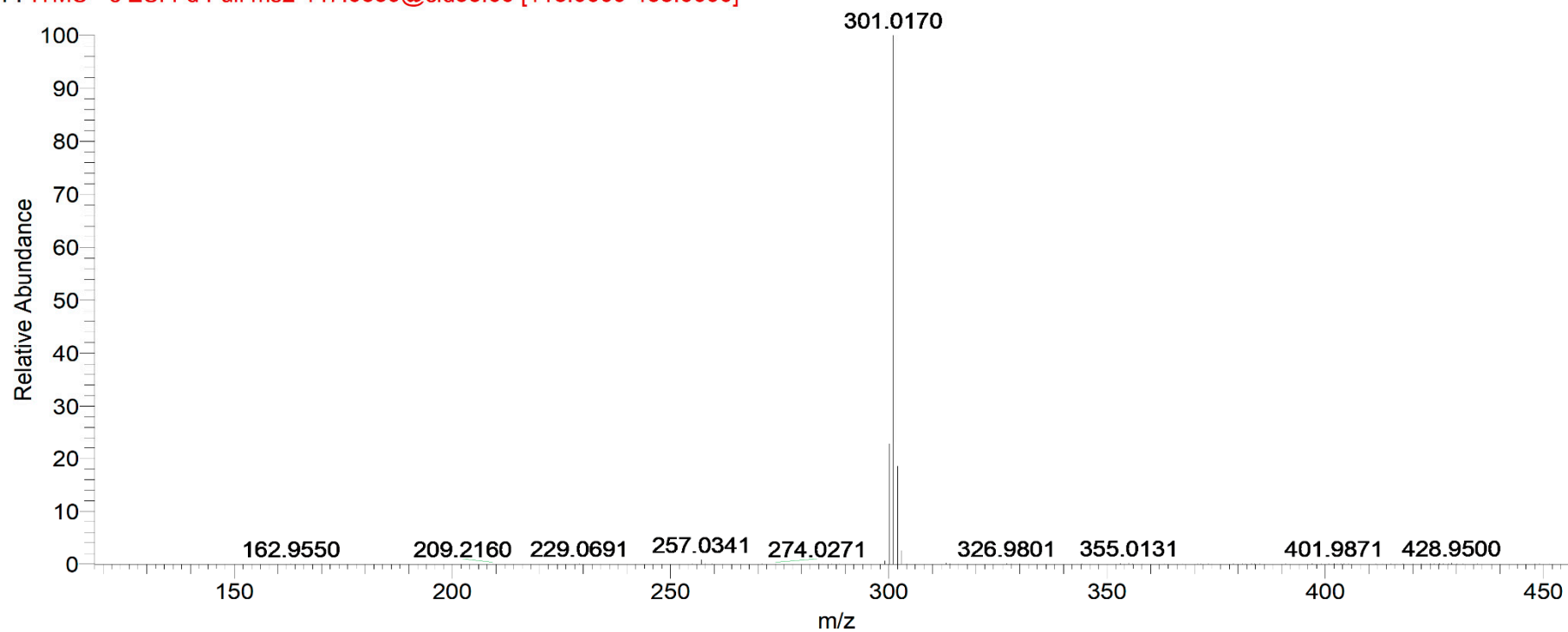


Figure S24. MS³ spectrum of compound 15.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #5892 RT: 17.68 AV: 1 NL: 1.08E5
F: ITMS - c ESI r d Full ms3 447.0559@cid35.00 301.0540@cid35.00 [77.0000-312.0000]

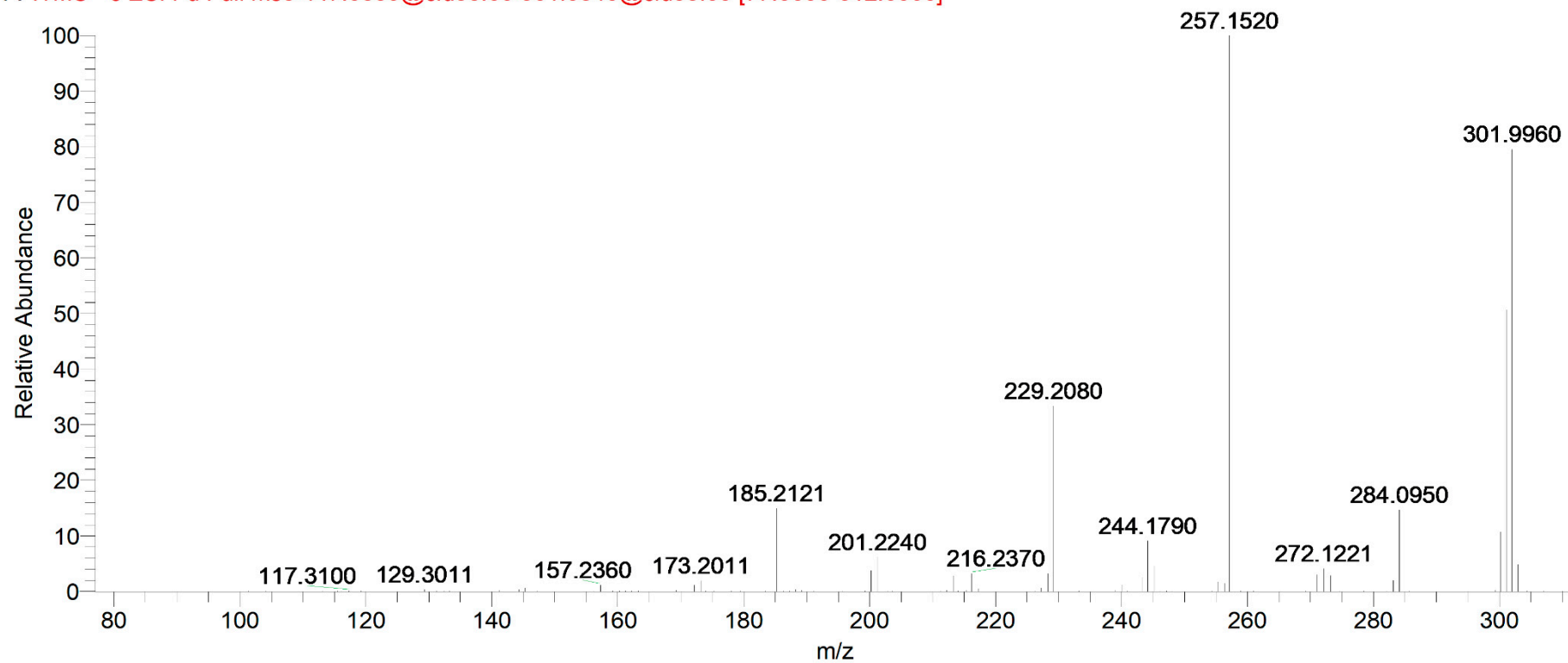


Figure S25. MS² spectrum of compound 16.

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #6243 RT: 18.78 AV: 1 NL: 3.78E5
F: ITMS - c ESI r d Full ms2 609.1437@cid35.00 [162.0000-620.0000]

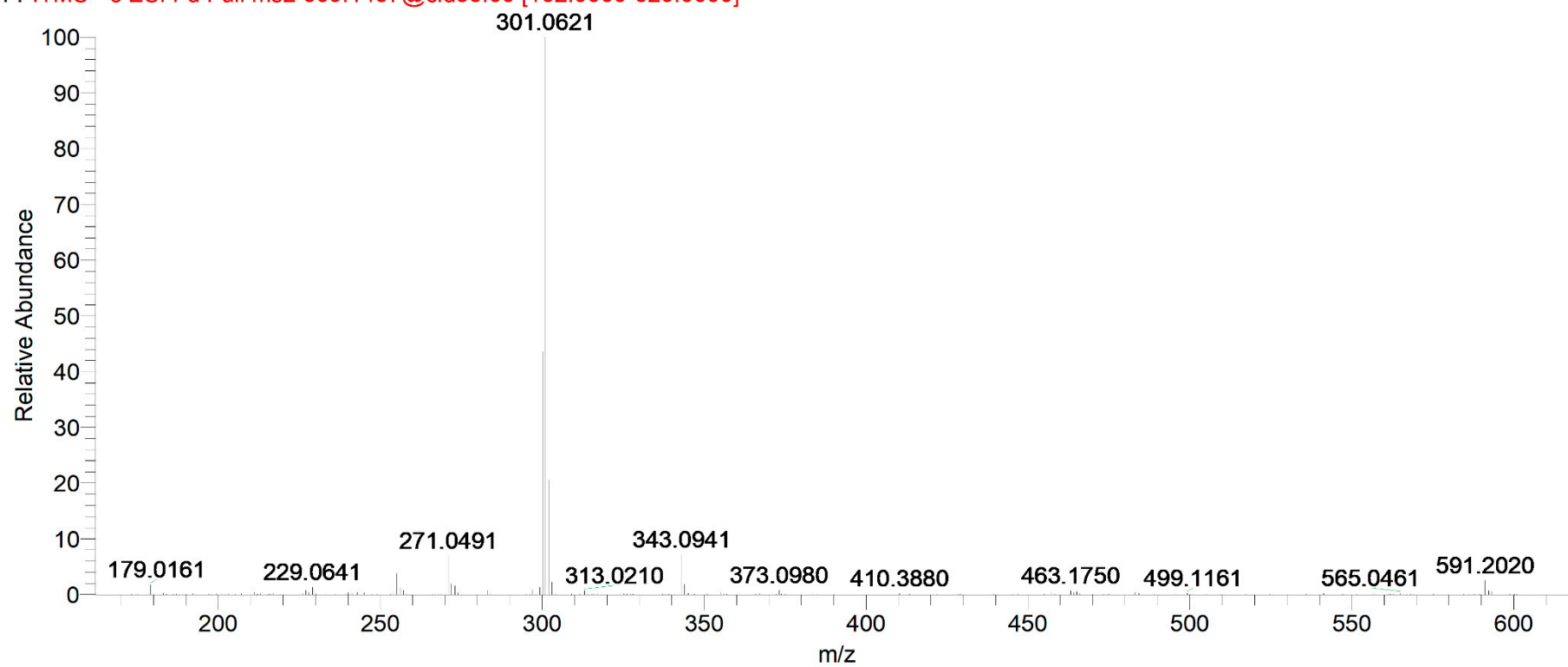


Figure S26. MS³spectrum of compound 16.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #6245 RT: 18.78 AV: 1 NL: 8.88E4
F: ITMS - c ESI r d Full ms3 609.1440@cid35.00 301.0481@cid35.00 [77.0000-312.0000]

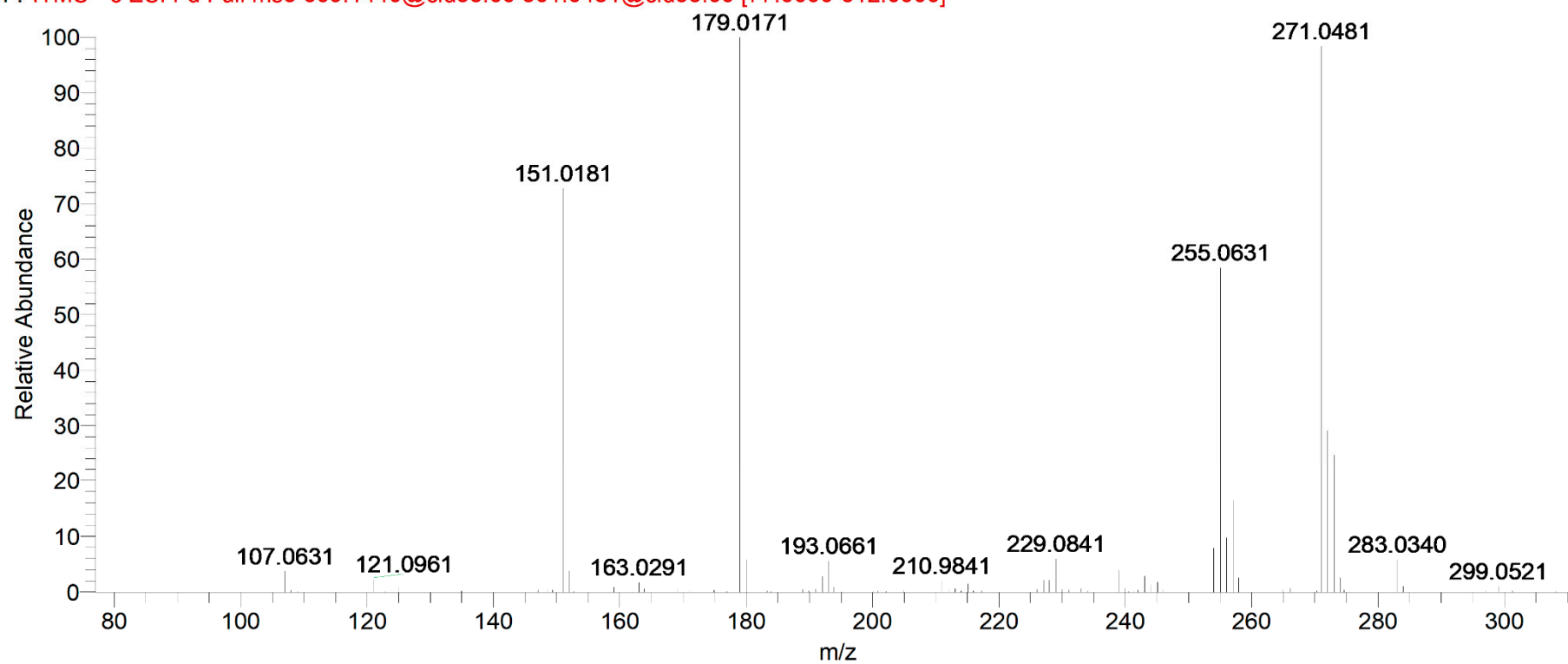


Figure S27. MS² spectrum of compound 17.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #6380 RT: 19.16 AV: 1 NL: 2.79E5
F: ITMS - c ESI r d Full ms2 300.9982@cid35.00 [77.0000-311.0000]

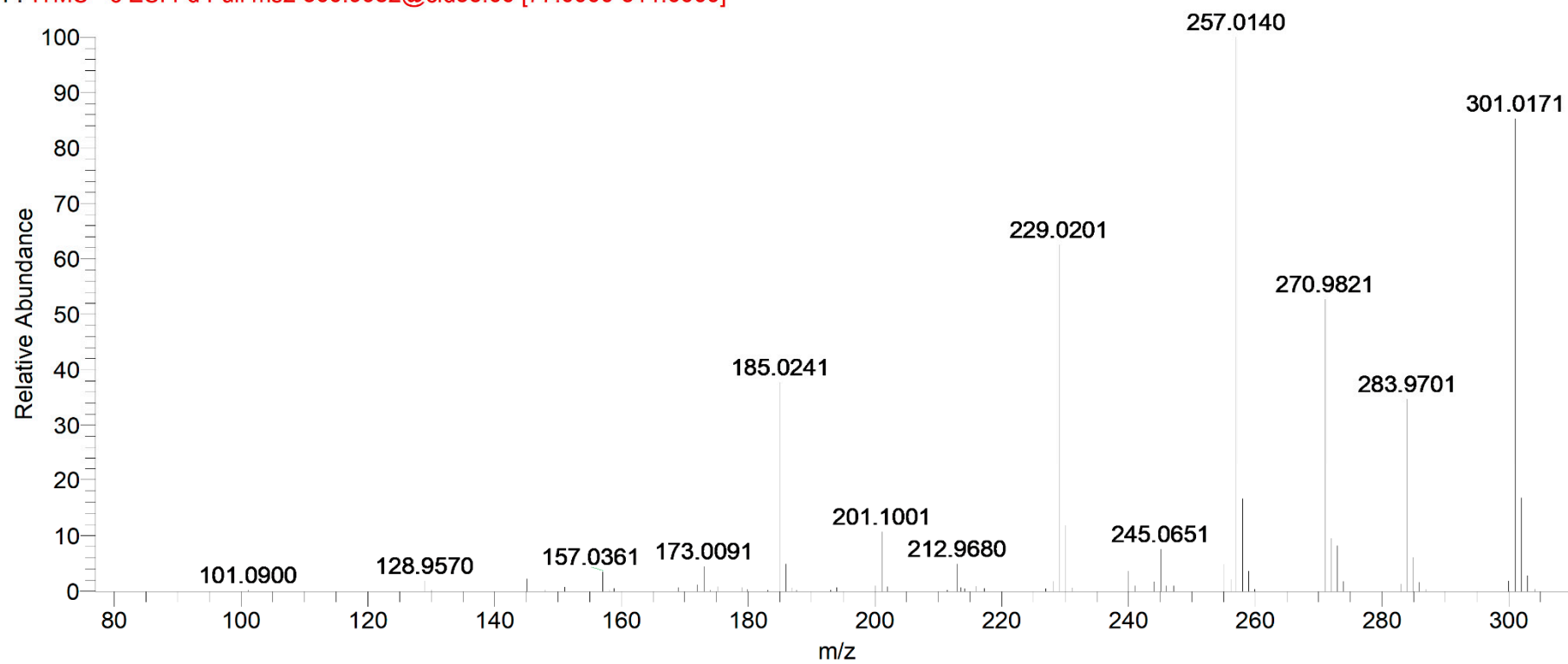


Figure S28. MS² spectrum of compound 18

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #6559 RT: 19.62 AV: 1 NL: 3.89E5
F: ITMS - c ESI r d Full ms2 639.1547@cid35.00 [170.0000-650.0000]

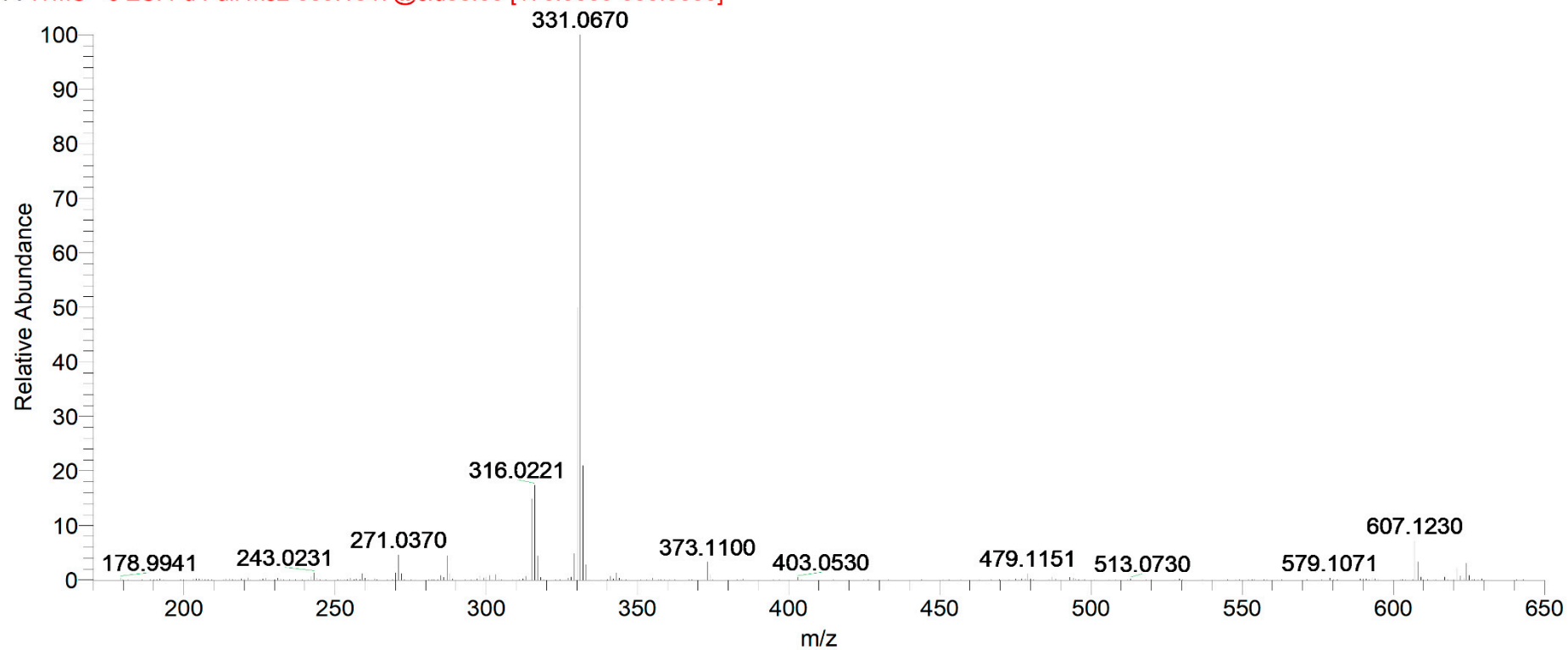


Figure S29. MS³ spectrum of compound 18.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #6562 RT: 19.63 AV: 1 NL: 8.35E4
F: ITMS - c ESI r d Full ms3 639.1547@cid35.00 316.0221@cid35.00 [82.0000-327.0000]

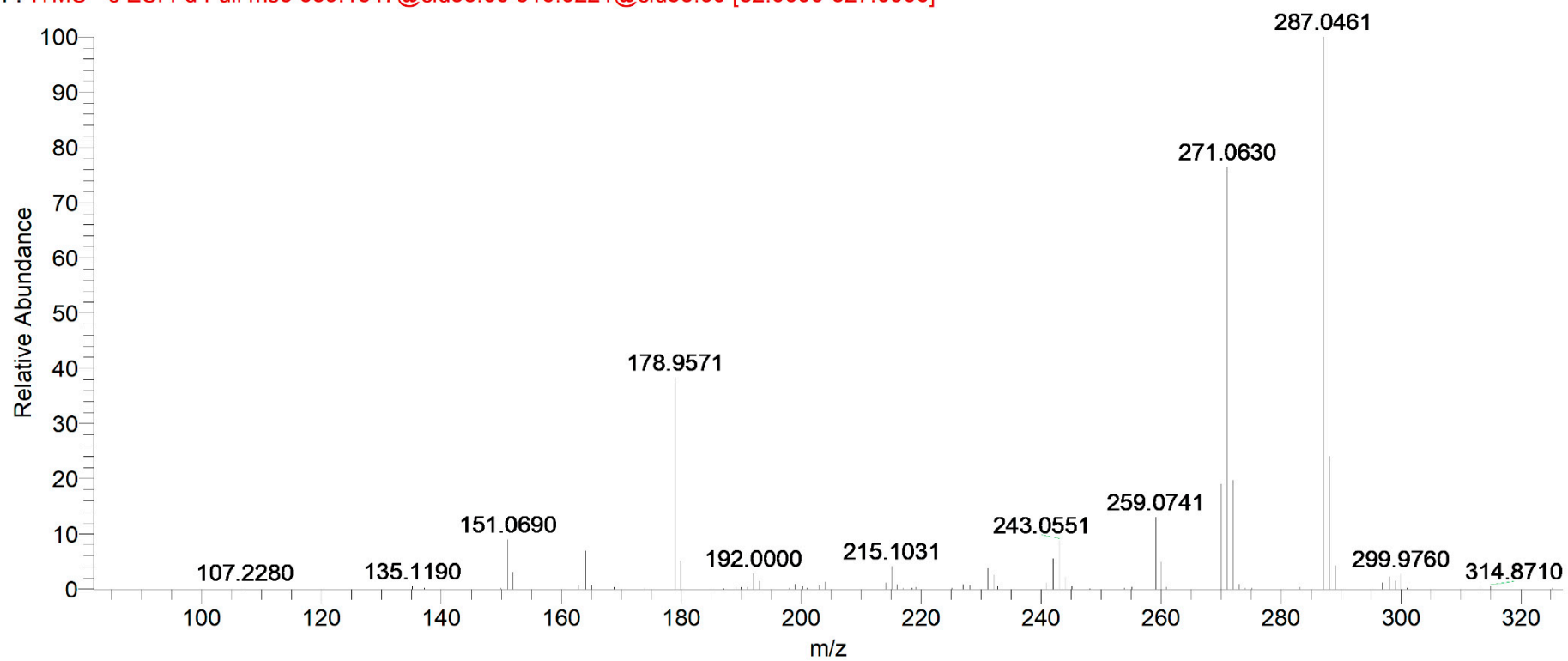


Figure S30. MS² spectrum of compound 19.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #6989 RT: 20.93 AV: 1 NL: 6.43E4
F: ITMS - c ESI r d Full ms2 593.1495@cid35.00 [158.0000-604.0000]

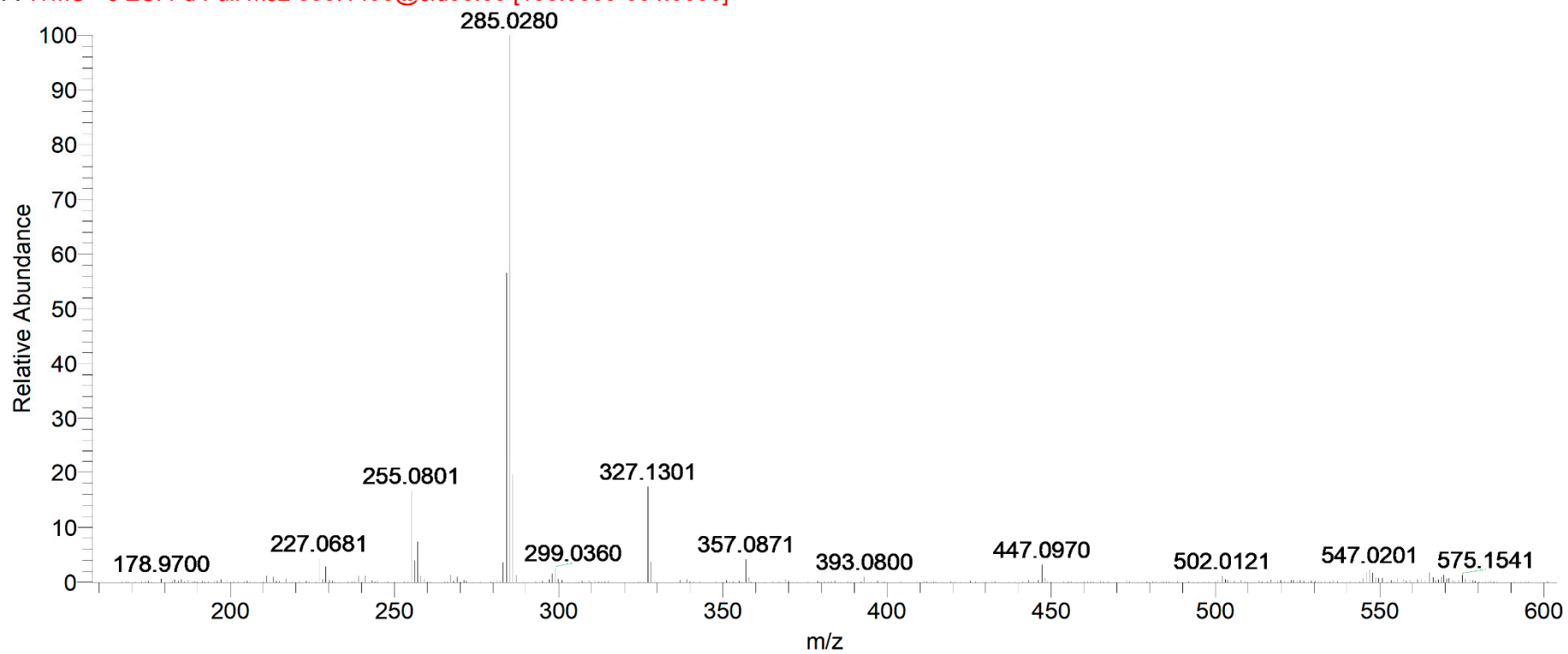


Figure S31. MS² spectrum of compound 20.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #7469 RT: 22.39 AV: 1 NL: 6.96E5
F: ITMS - c ESI r d Full ms2 623.1600@cid35.00 [166.0000-634.0000]

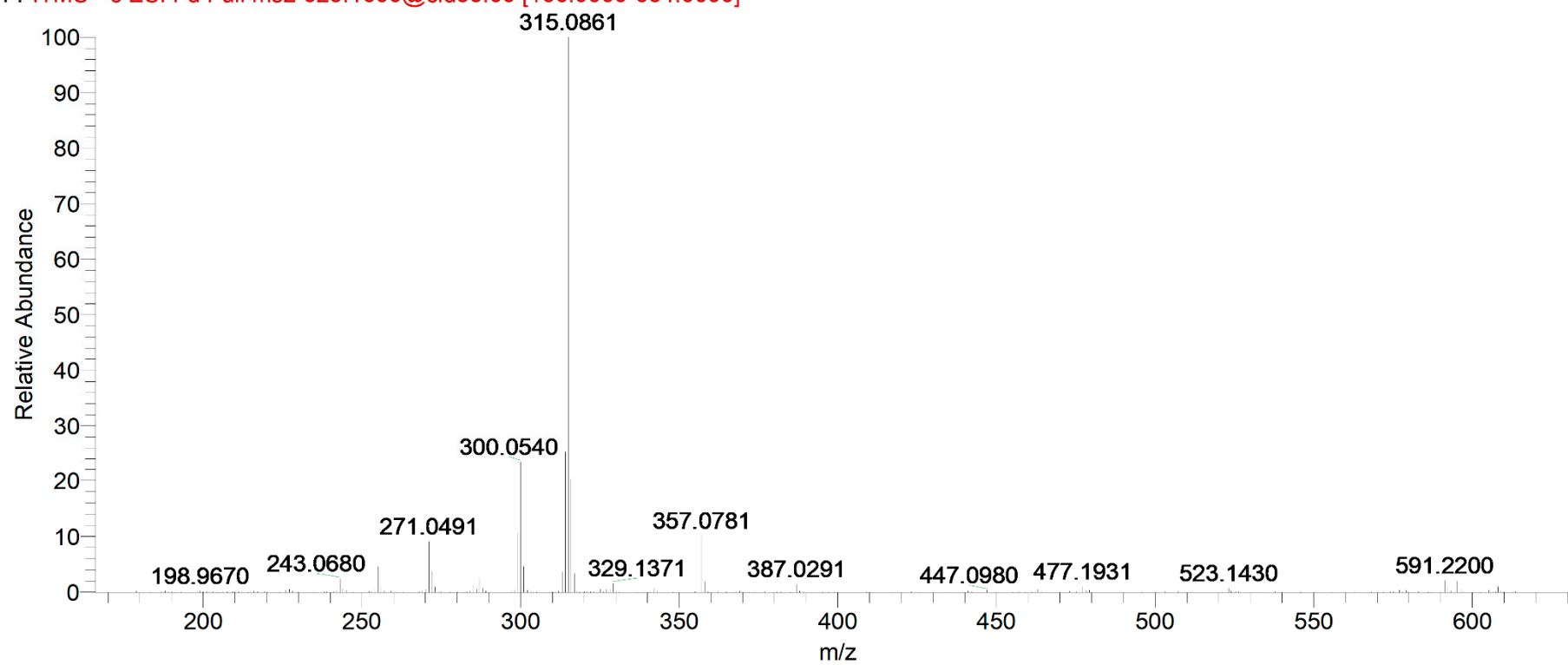


Figure S32. MS² spectrum of compound 21.

barbeya-leaf_-meoh_29292_leaf_posnegesi_ft_meoh60min #7648 RT: 22.85 AV: 1 NL: 1.46E6
F: ITMS - c ESI r d Full ms2 623.1594@cid35.00 [166.0000-634.0000]

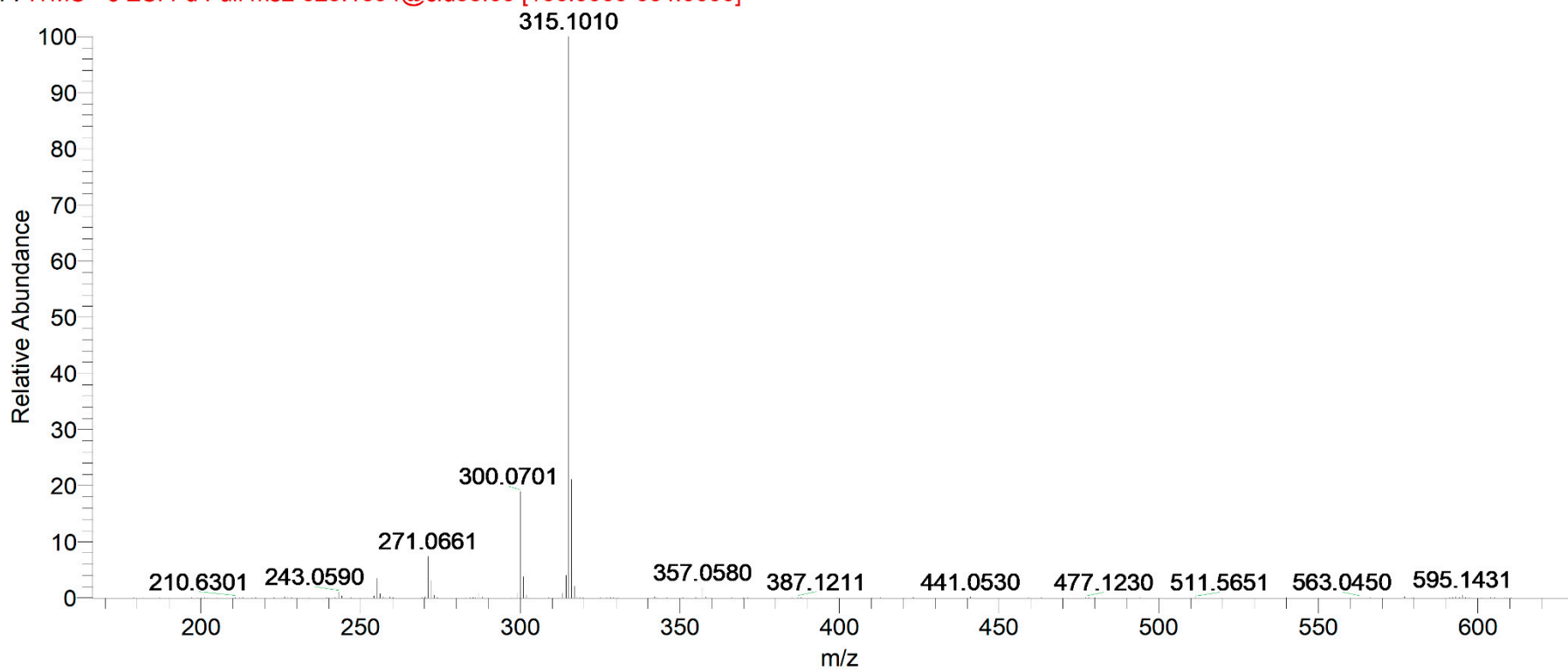


Figure S33. MS² spectrum of compound 22.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #7812 RT: 23.23 AV: 1 NL: 1.41E6
F: ITMS - c ESI r d Full ms2 653.1700@cid35.00 [174.0000-664.0000]

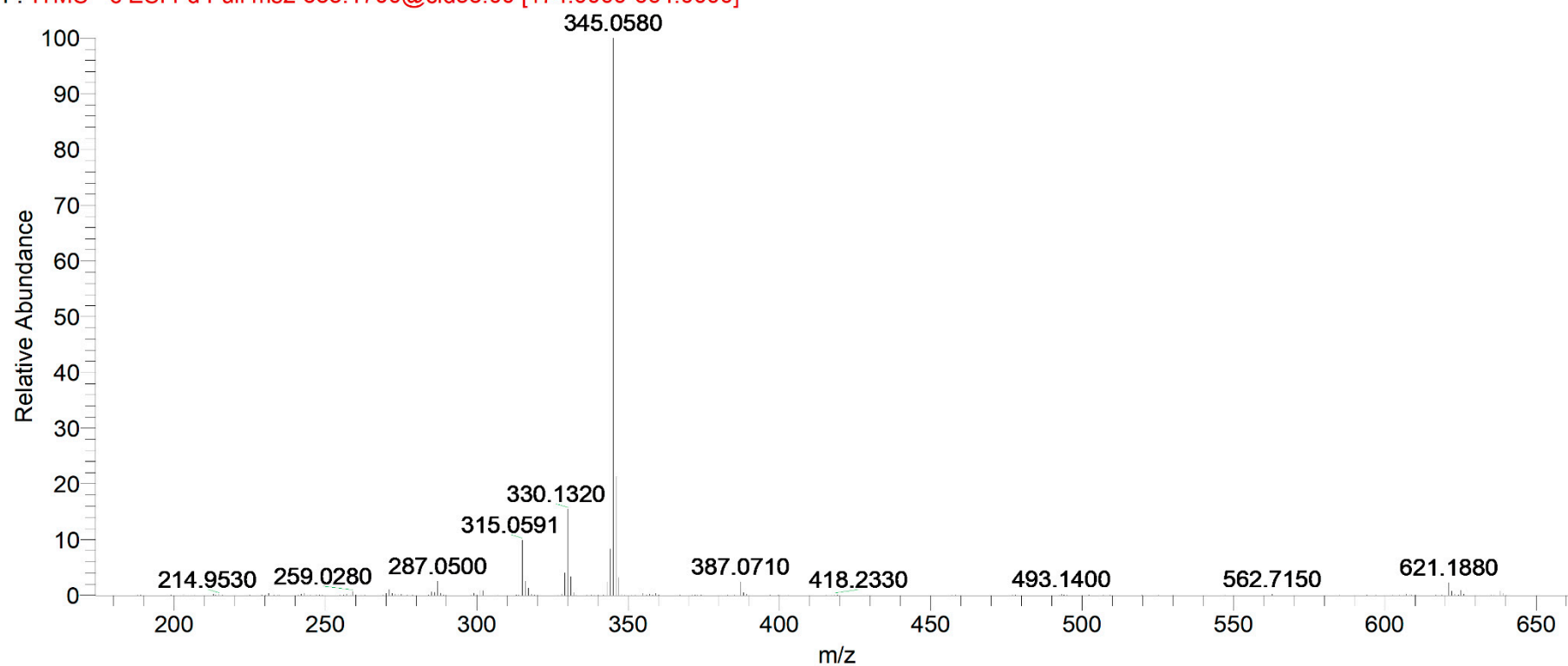


Figure S34. MS³ spectrum of compound 22.

barbeya-leaf_-meoh__29292_leaf_posnegesi_ft_meoh60min #7816 RT: 23.23 AV: 1 NL: 2.49E5
F: ITMS - c ESI r d Full ms3 653.1700@cid35.00 315.0591@cid35.00 [81.0000-326.0000]

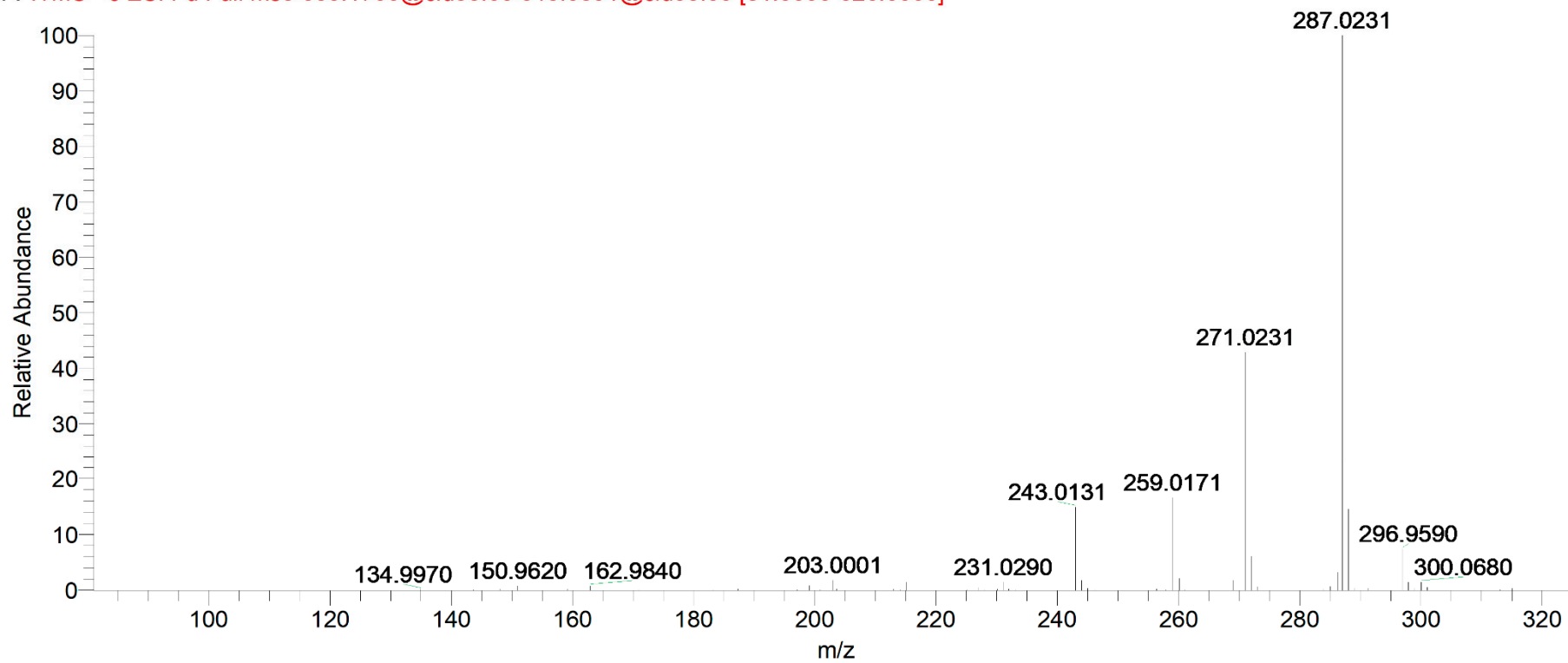


Figure S35. MS² spectrum of compound 23.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #8949 RT: 26.95 AV: 1 NL: 4.73E5

F: ITMS - c ESI r d Full ms2 609.1229@cid35.00 [162.0000-620.0000]

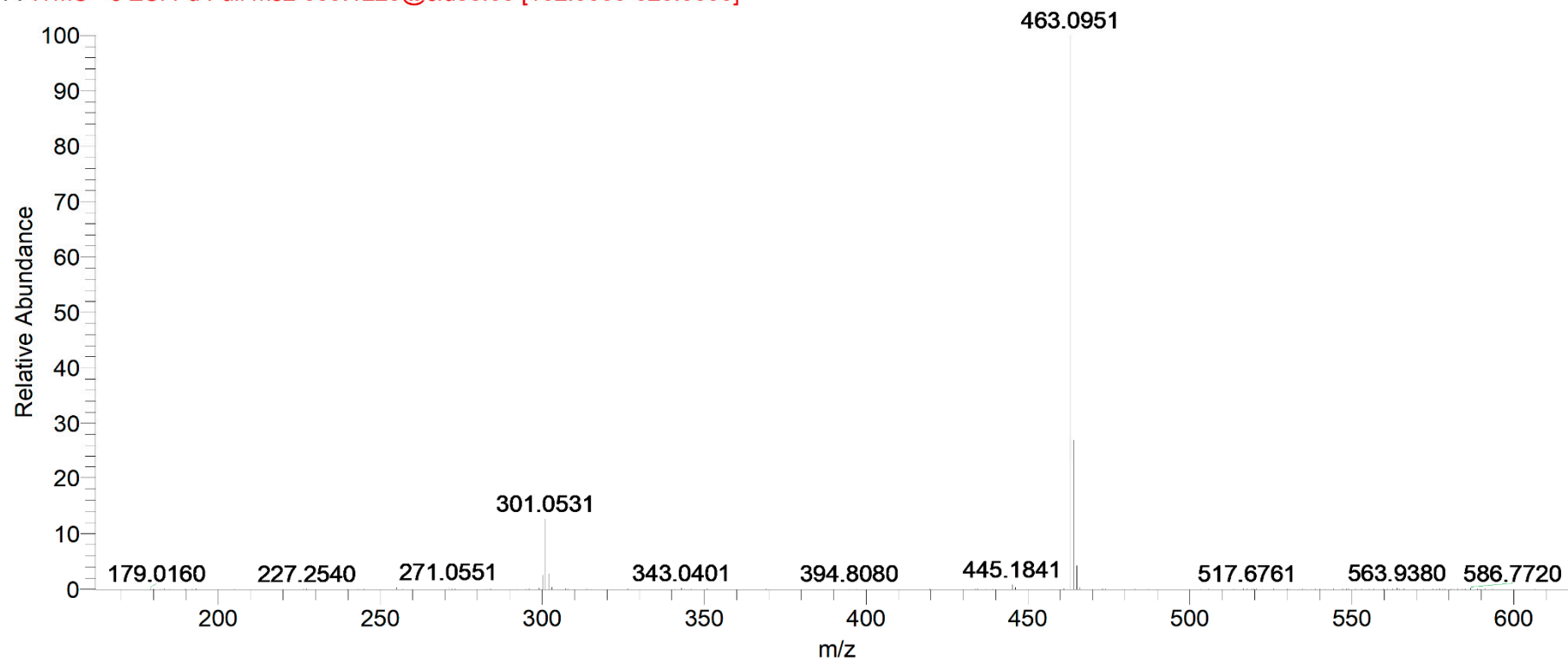


Figure S36. MS³ spectrum of compound 23.

Barbeya-Leaf_-MeoH__29292_leaf_posnegESI_FT_MeOH60min #8952 RT: 26.96 AV: 1 NL: 2.65E4
F: ITMS - c ESI r d Full ms3 609.1229@cid35.00 301.0531@cid35.00 [77.0000-312.0000]

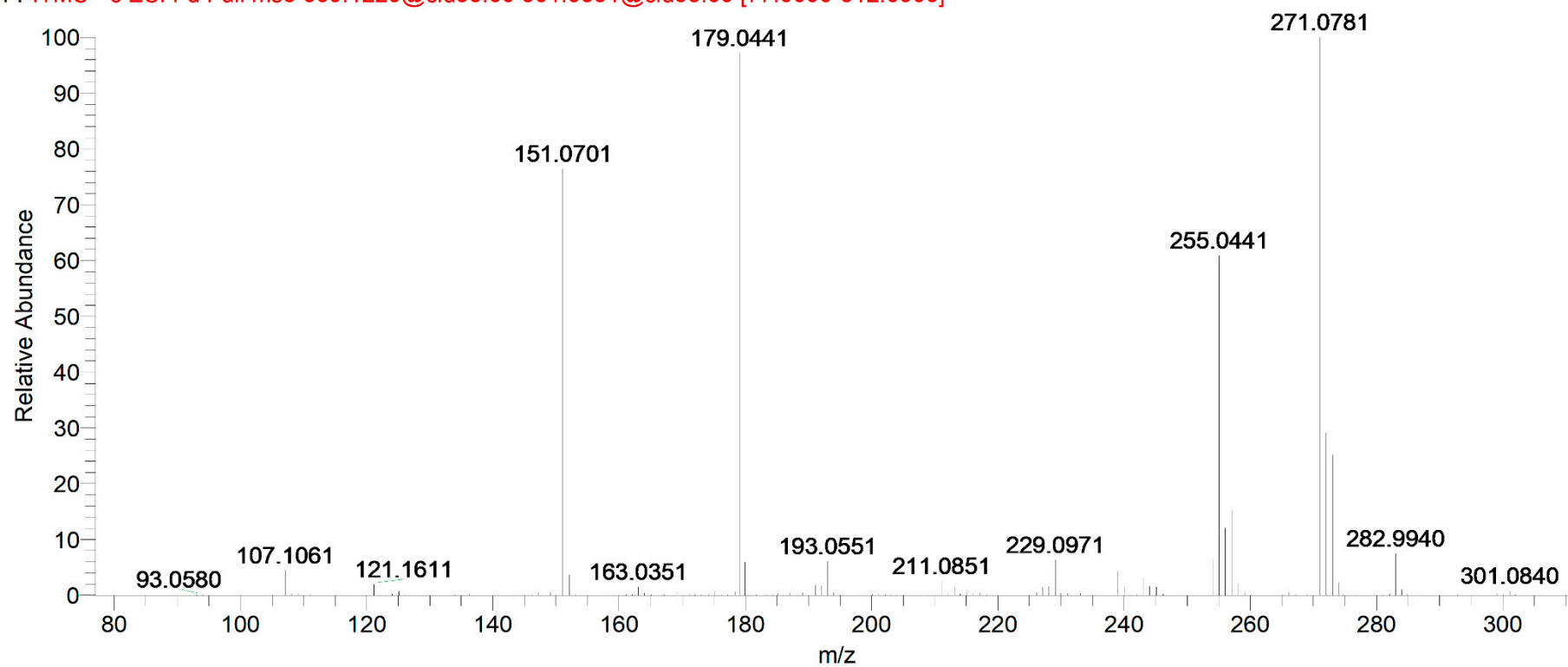


Figure S37. MS² spectrum of compound 24.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #8996 RT: 27.08 AV: 1 NL: 3.20E5
F: ITMS - c ESI r d Full ms2 639.1335@cid35.00 [170.0000-650.0000]

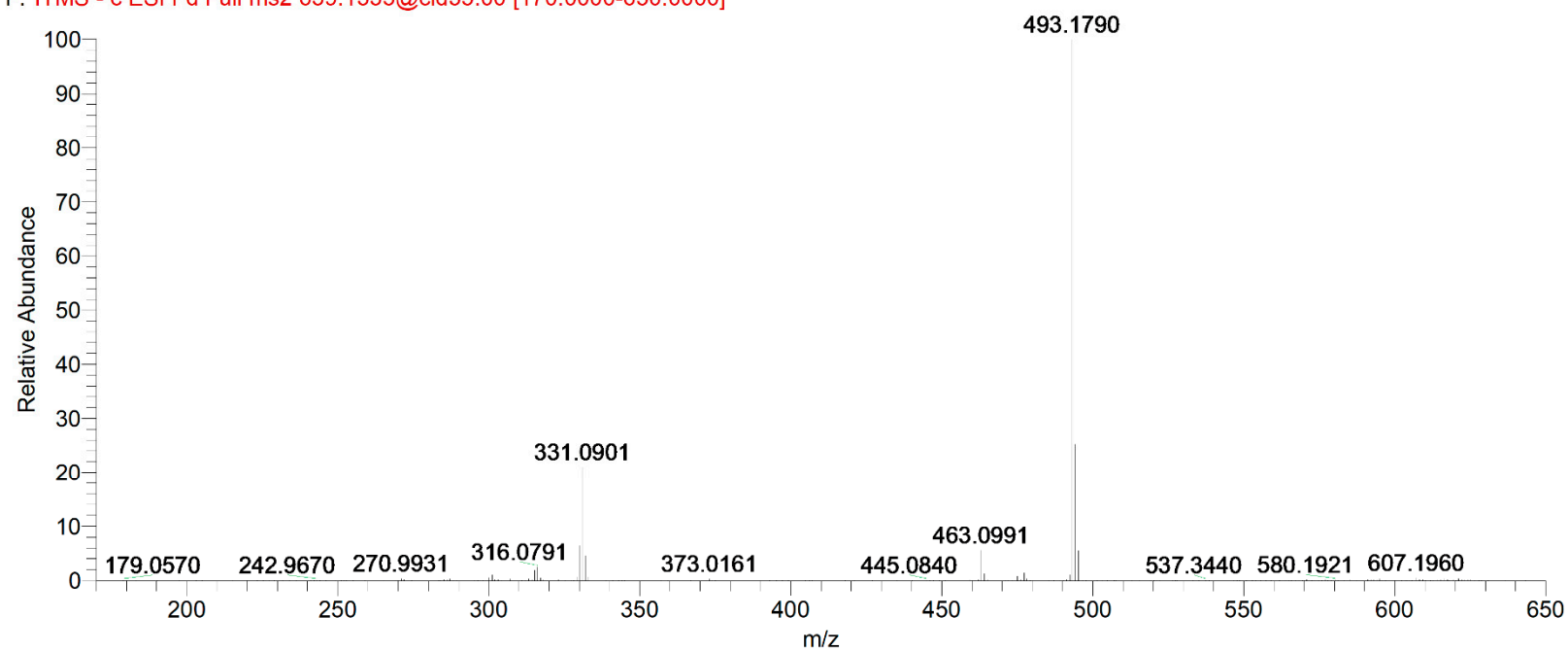


Figure S38. MS³ spectrum of compound 24.

Barbeya-Leaf_-MeoH__29292_leaf_posnegESI_FT_MeOH60min #8999 RT: 27.09 AV: 1 NL: 6.44E4
F: ITMS - c ESI r d Full ms3 639.1329@cid35.00 331.0890@cid35.00 [86.0000-342.0000]

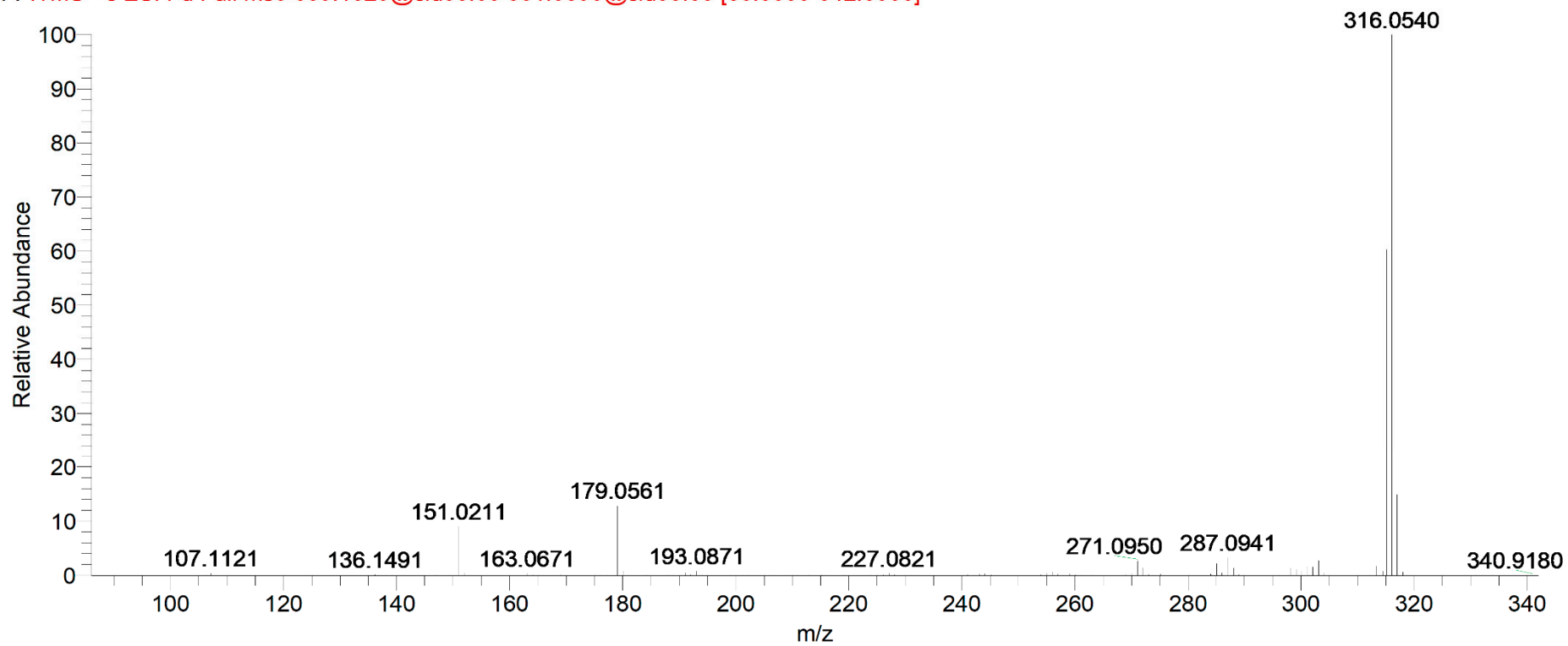


Figure S39. MS² spectrum of compound 25.

Barbeya-Leaf_-MeOH_29292_leaf_posnegESI_FT_MeOH60min #9158 RT: 27.55 AV: 1 NL: 7.44E5
F: ITMS - c ESI r d Full ms2 711.3936@cid35.00 [190.0000-722.0000]

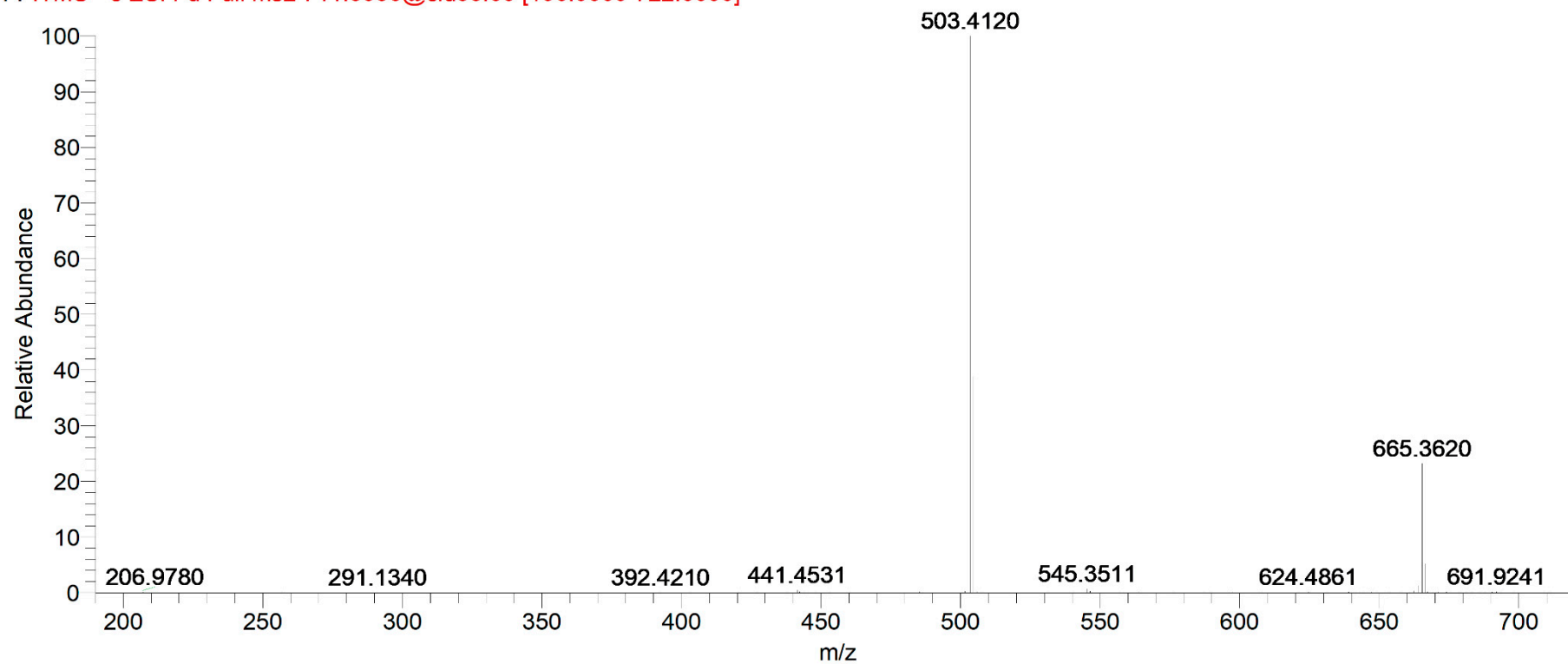


Figure S40. MS³ spectrum of compound 25.

Barbeya-Leaf_-MeOH_29292_leaf_posnegESI_FT_MeOH60min #9160 RT: 27.55 AV: 1 NL: 2.00E5
F: ITMS - c ESI r d Full ms3 711.3936@cid35.00 503.4120@cid35.00 [133.0000-514.0000]

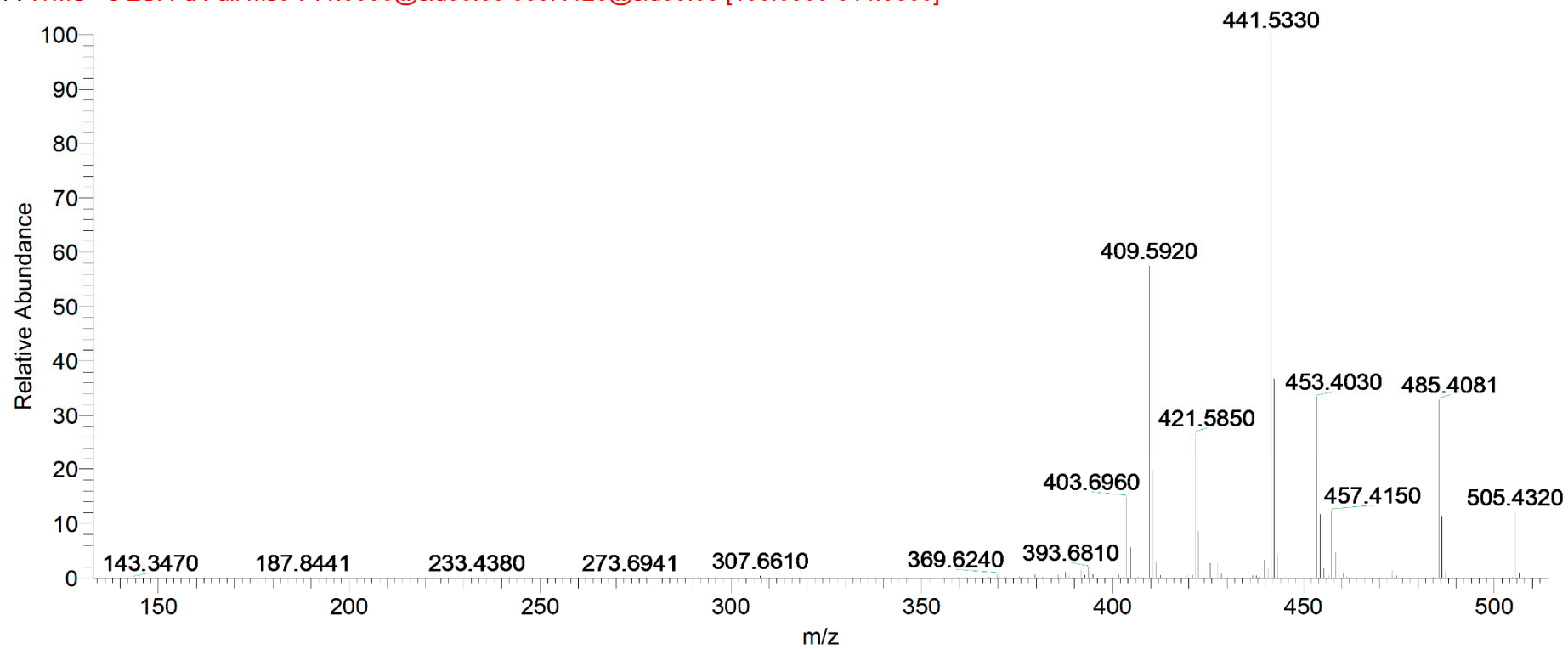


Figure S41. MS² spectrum of compound 26.

Barbeya-Leaf_-MeOH_29292_leaf_posnegESI_FT_MeOH60min #9978 RT: 30.11 AV: 1 NL: 4.45E5
F: ITMS - c ESI r d Full ms2 653.1490@cid35.00 [174.0000-664.0000]

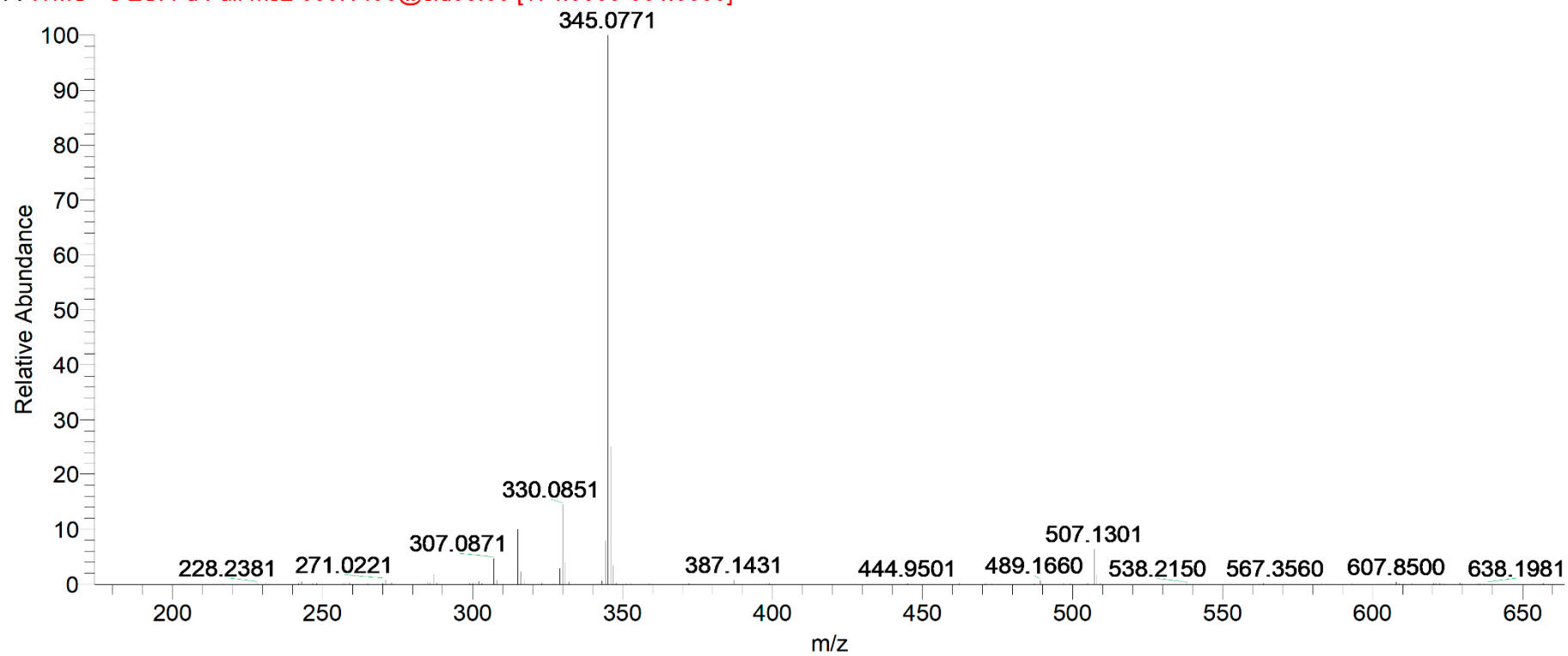


Figure S42. MS³ spectrum of compound 26.

Barbeya-Leaf_-MeOH__29292_leaf_posnegESI_FT_MeOH60min #9982 RT: 30.11 AV: 1 NL: 9.72E4
F: ITMS - c ESI r d Full ms3 653.1490@cid35.00 315.0471@cid35.00 [81.0000-326.0000]

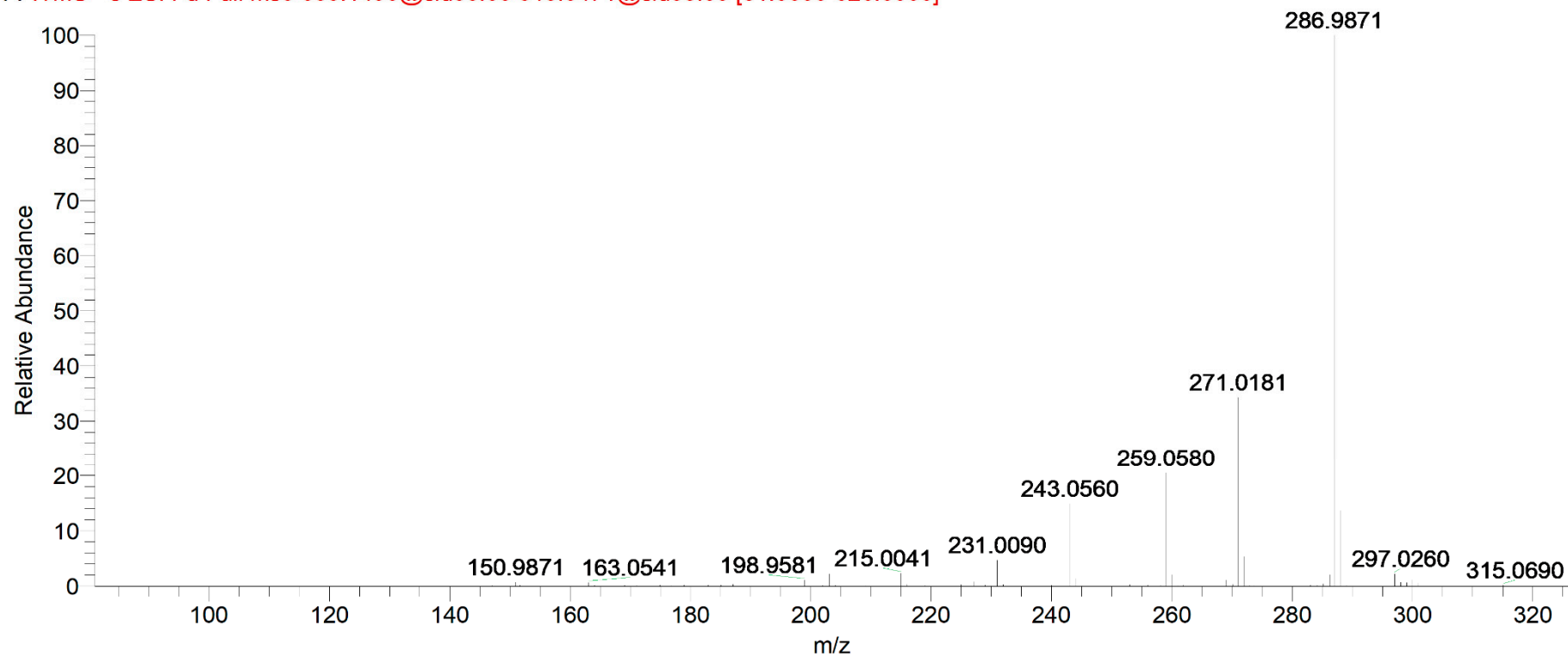


Figure S43. MS² spectrum of compound 27.

Barbeya-Leaf_-MeOH_29292_leaf_posnegESI_FT_MeOH60min #10087 RT: 30.41 AV: 1 NL: 3.51E5
F: ITMS - c ESI r d Full ms2 623.1386@cid35.00 [166.0000-634.0000]

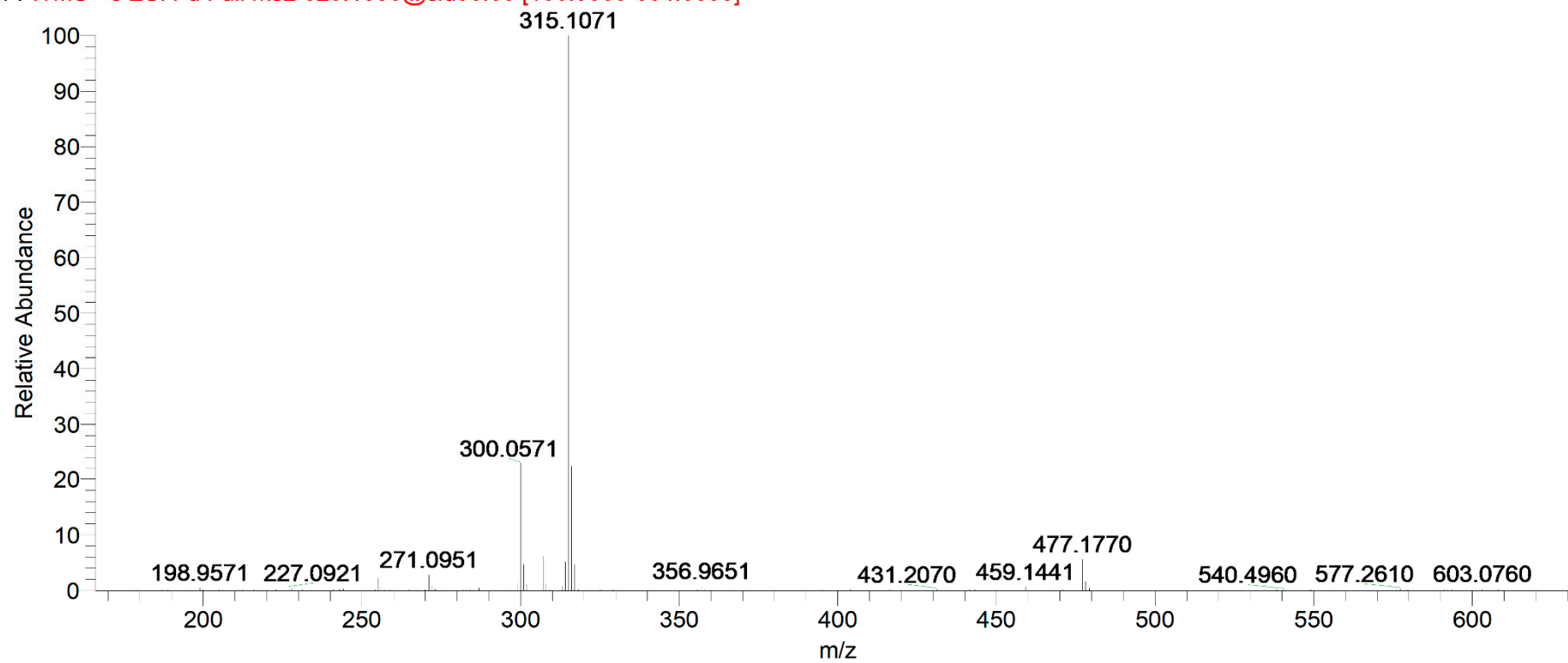


Figure S44. MS³ spectrum of compound 27.

irbeya-Leaf_-MeOH_29292_leaf_posnegESI_FT_MeOH60min #10090 RT: 30.42 AV: 1 NL: 4.97E4
ITMS - c ESI r d Full ms3 623.1386@cid35.00 300.0571@cid35.00 [77.0000-311.0000]

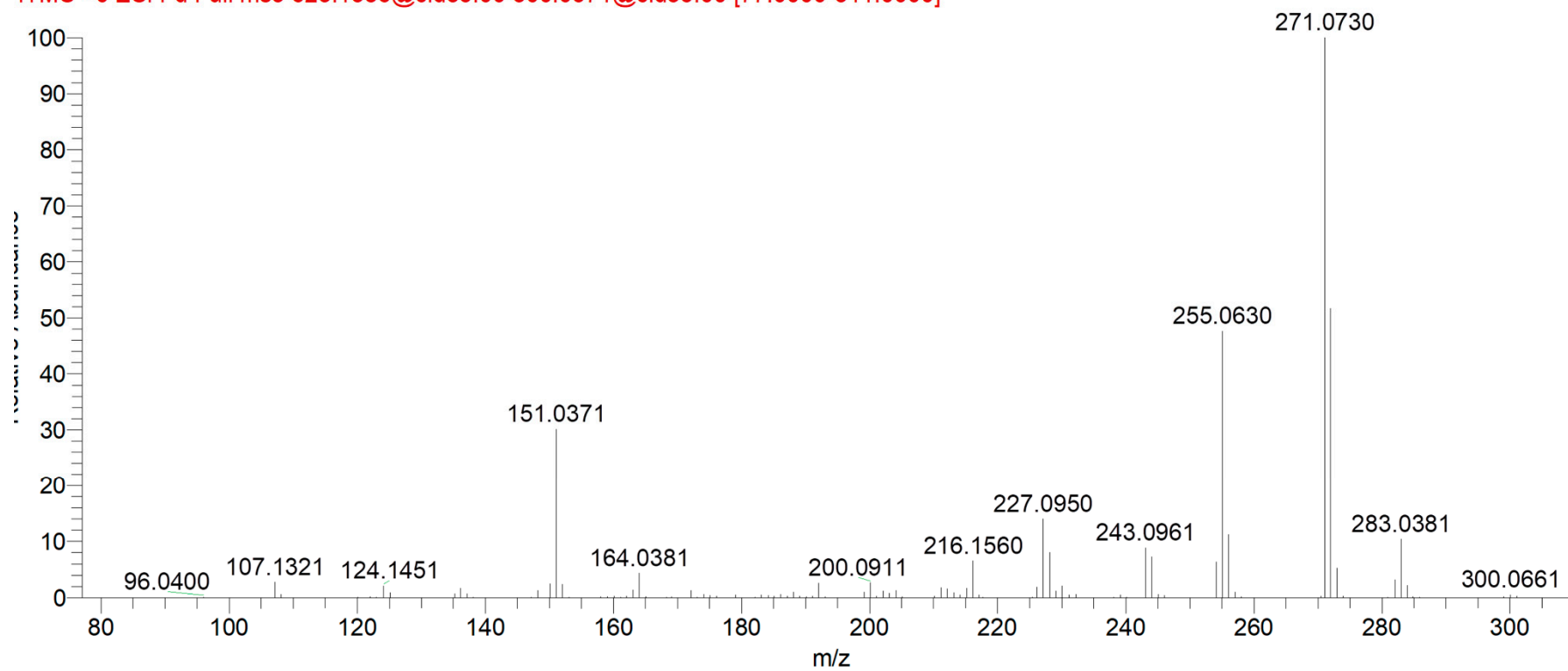


Figure S45. Dose-response curve of α -amylase inhibition by acarbose and methanol extracts obtained from *Barbeya oleoides* leaves (200 $\mu\text{g/ml}$).

