

## Supporting data

# Enhancement of Female Rat Fertility via Ethanolic Extract from *Nigella sativa* L. (Black Cumin) Seeds Assessed via HPLC-ESI-MS/MS and Molecular Docking

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Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 33.781 min  
Precursor: 340.6 Da

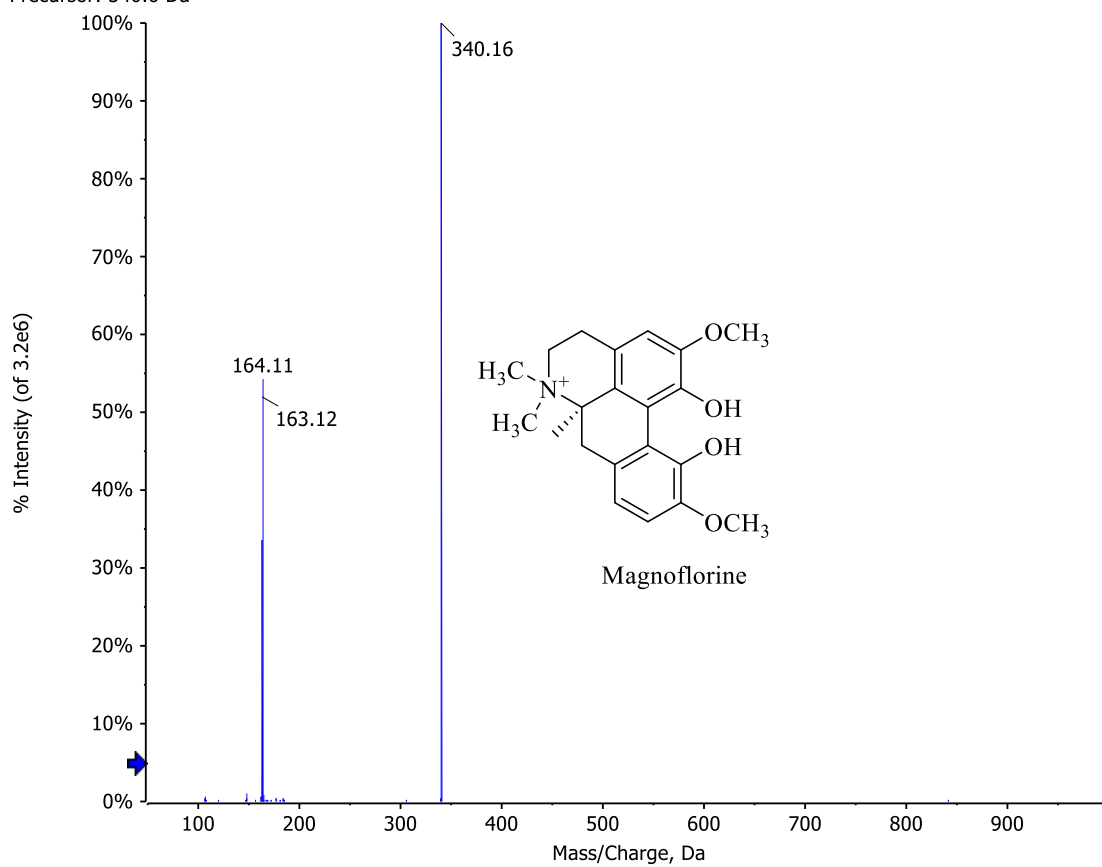


Figure S1: Ms/Ms spectra of Magnoflorine

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 27.012 min  
Precursor: 295.6 Da, Charge: 1

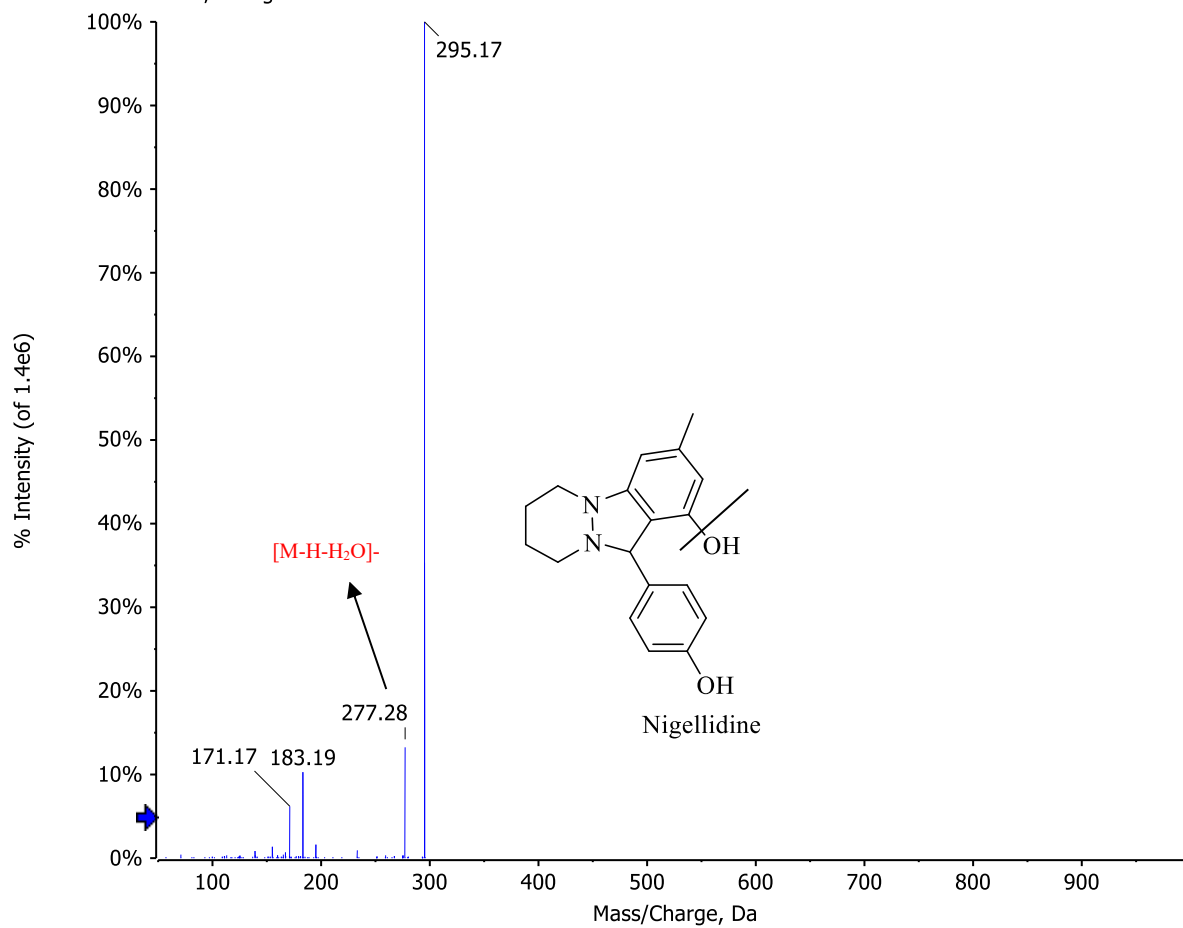


Figure S2: Ms/Ms spectra of Nigellidine

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 10.230 min  
Precursor: 293.3 Da, Charge: 1

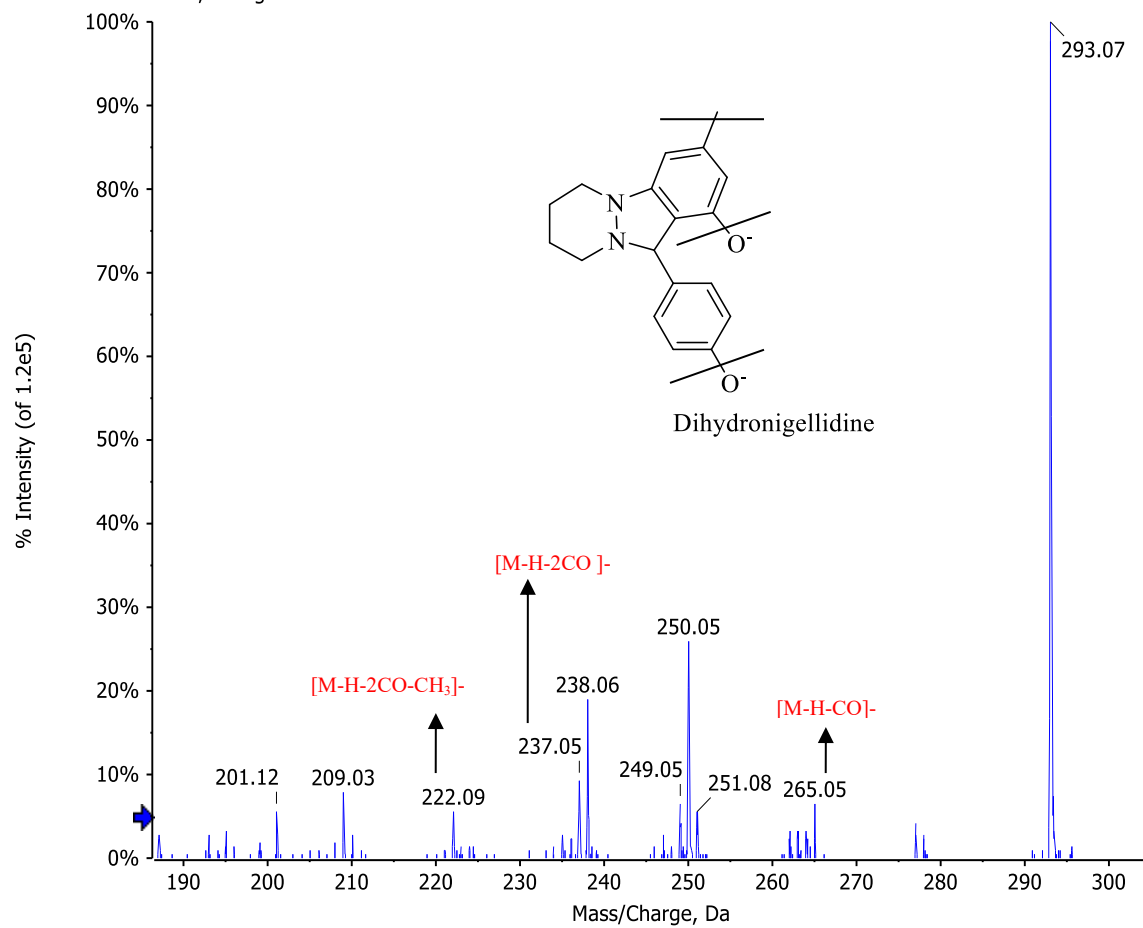


Figure S3: Ms/Ms spectra of Dihydroneigellidine

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 34.289 min  
Precursor: 311.8 Da

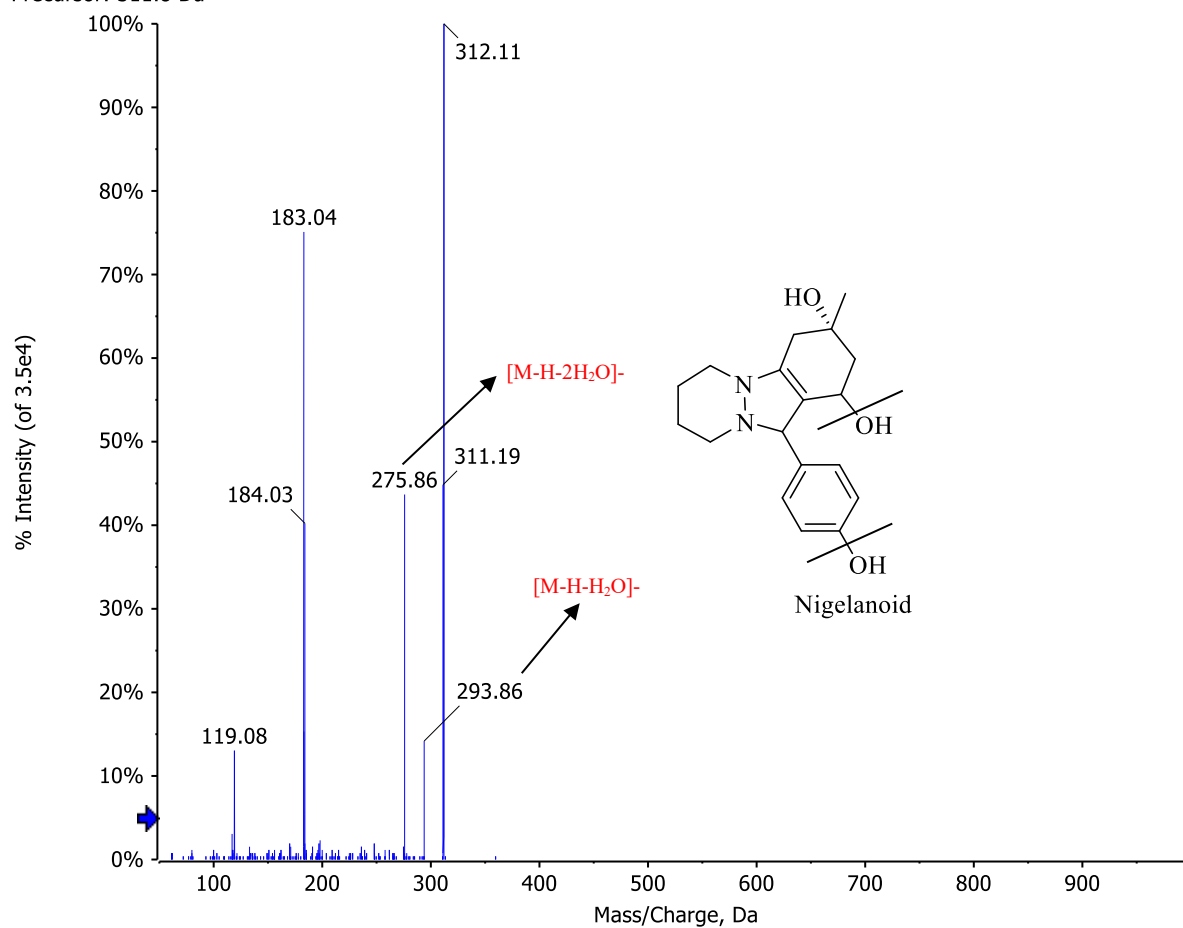


Figure S4: Ms/Ms spectra of Nigelanoid

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 16.437 min  
Precursor: 749.4 Da, Charge: 1

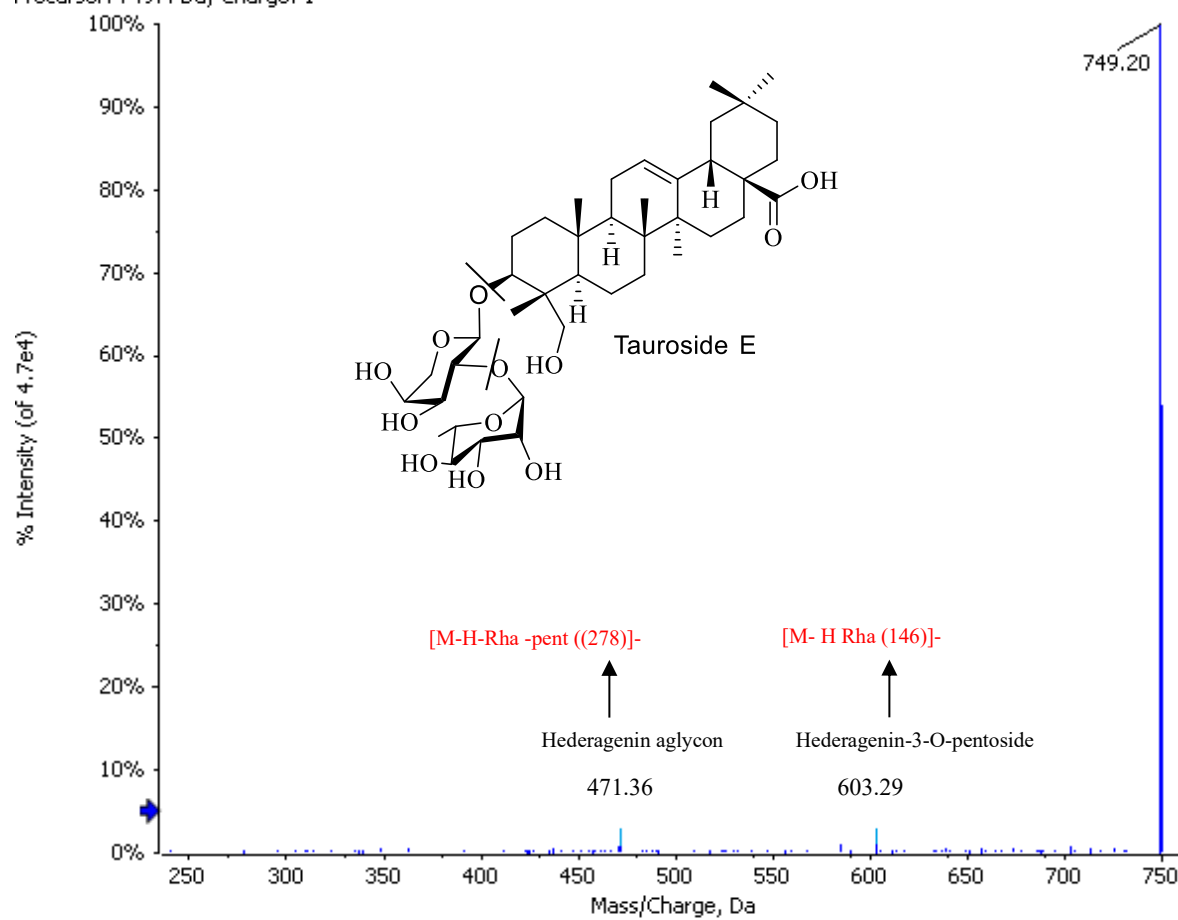


Figure S5: Ms/Ms spectra of Tauroside E

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 18.390 min  
Precursor: 485.7 Da, Charge: 1

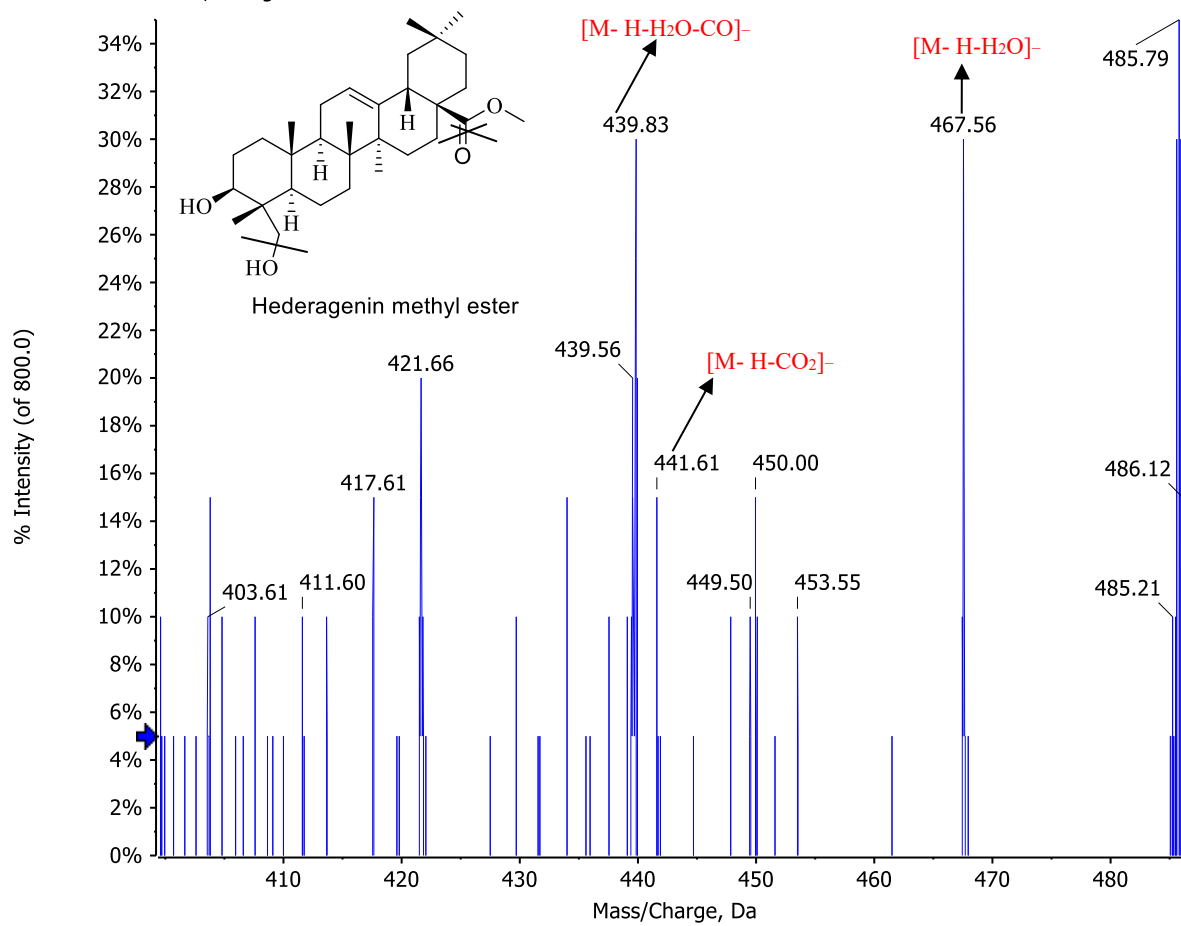


Figure S6: Ms/Ms spectra of Hederagenin methyl ester

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 8.423 min  
Precursor: 325.0 Da

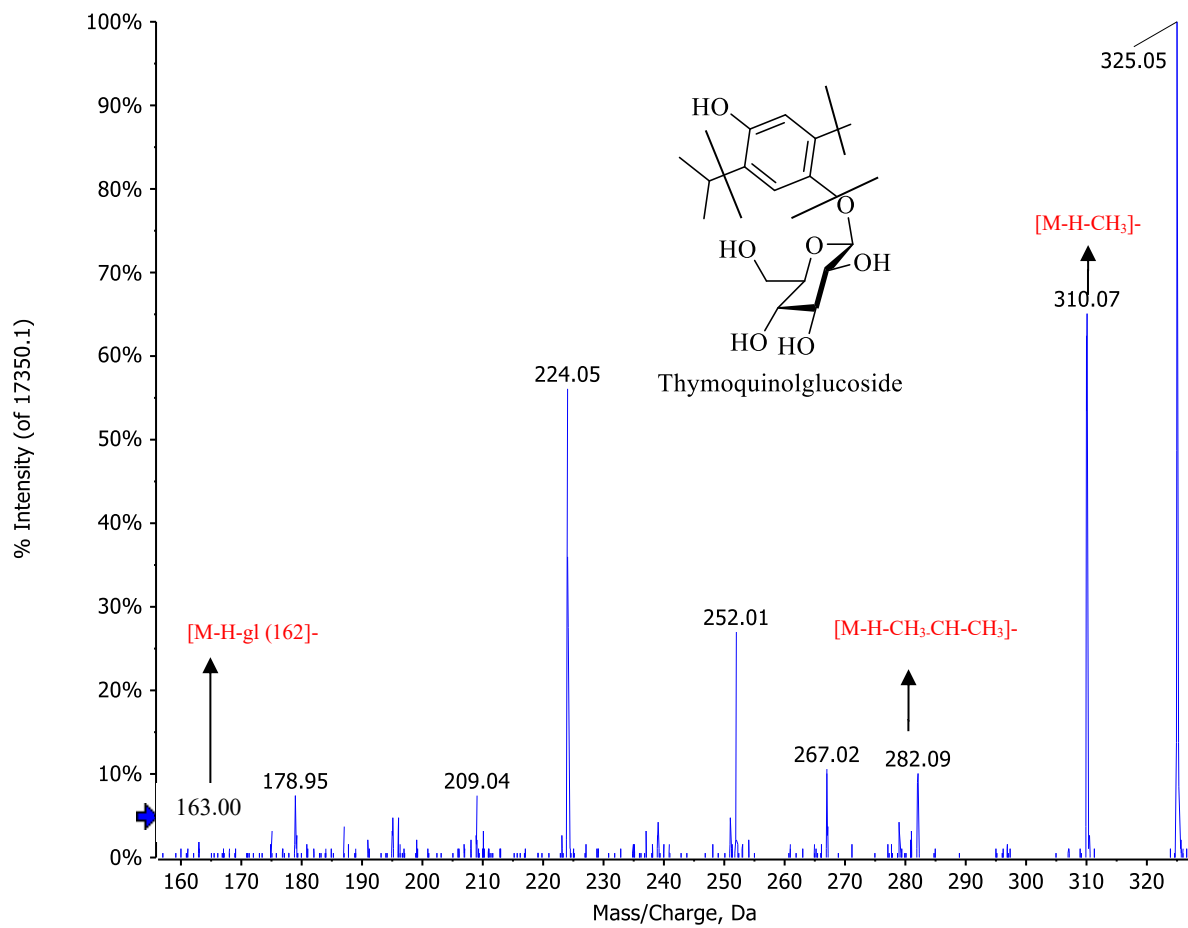


Figure S7: Ms/Ms spectra of Thymoquinolglucoside



Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 31.689 min  
Precursor: 163.8 Da, Charge: 1

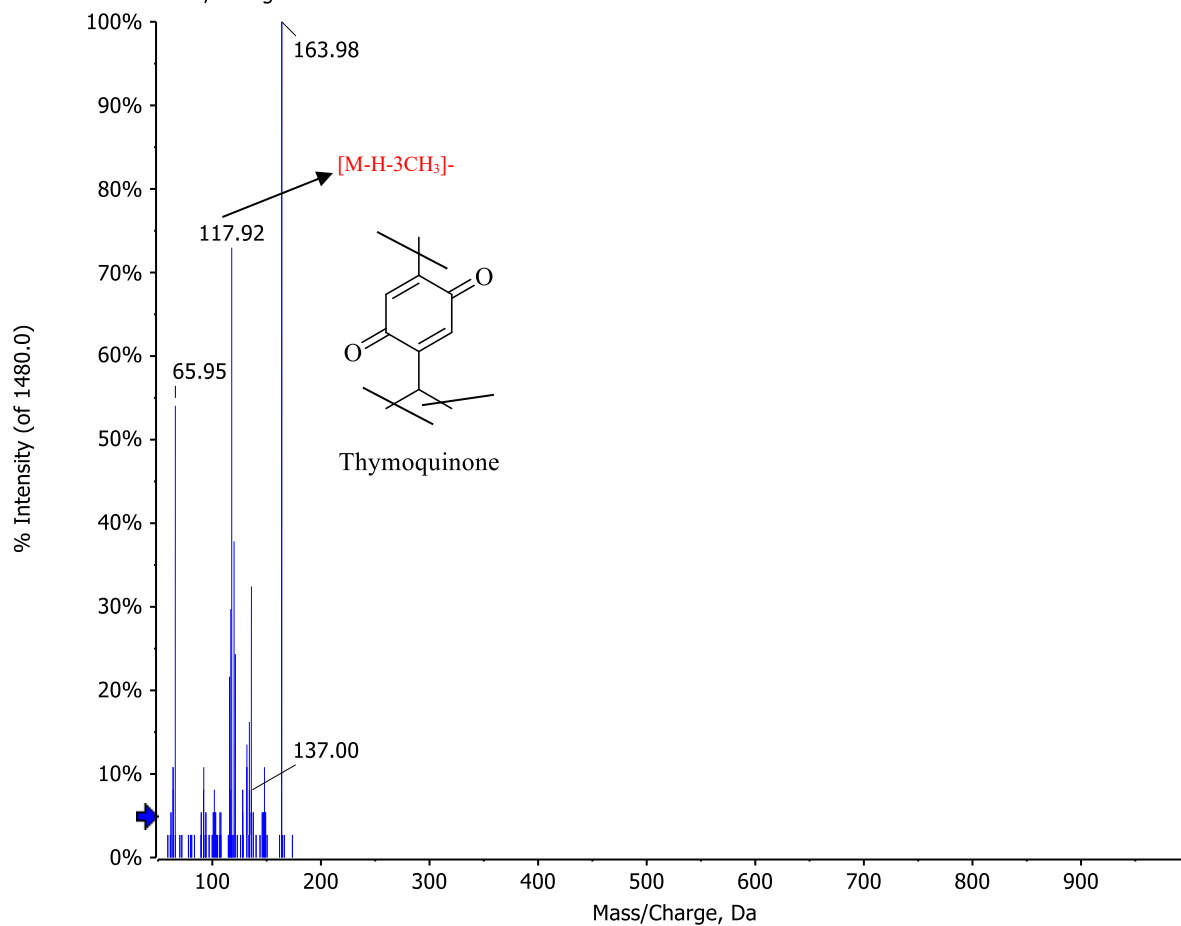


Figure S8: Ms/Ms spectra of Thymoquinone

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 33.622 min  
Precursor: 339.0 Da

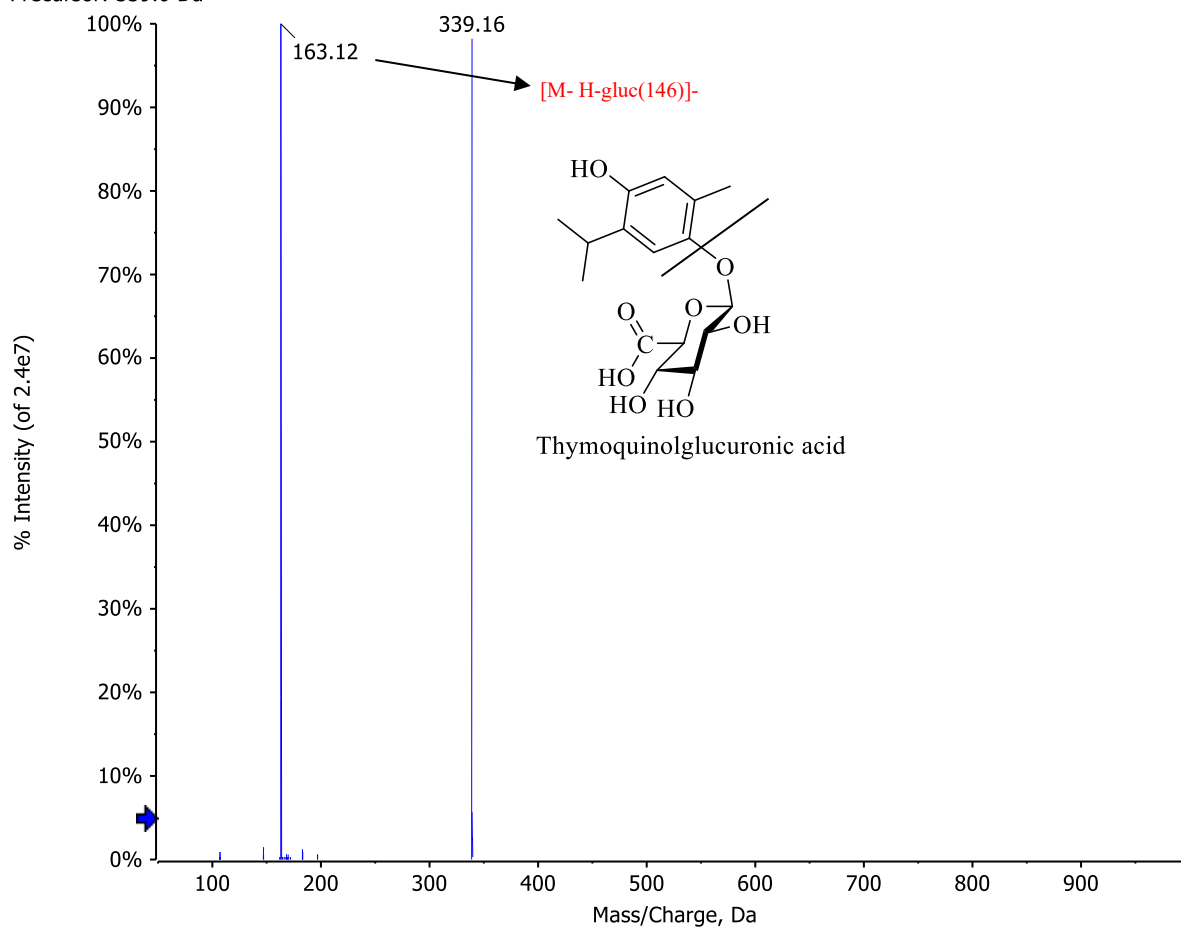


Figure S9: Ms/Ms spectra of Thymoquinolglucuronic acid

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 32.932 min  
Precursor: 355.3 Da

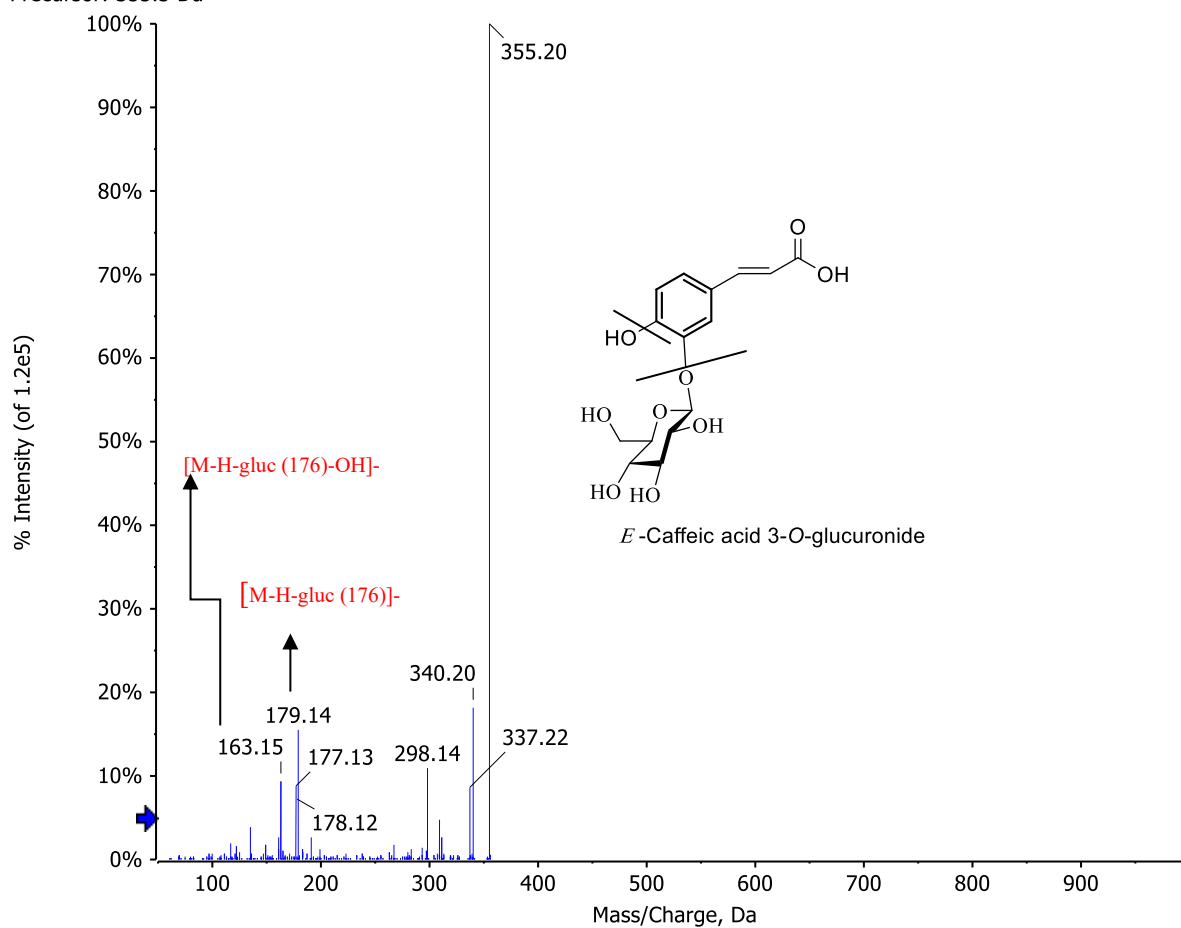


Figure S10: Ms/Ms spectra of Caffeic acid 3-O-glucuronide

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 34.931 min  
Precursor: 279.4 Da

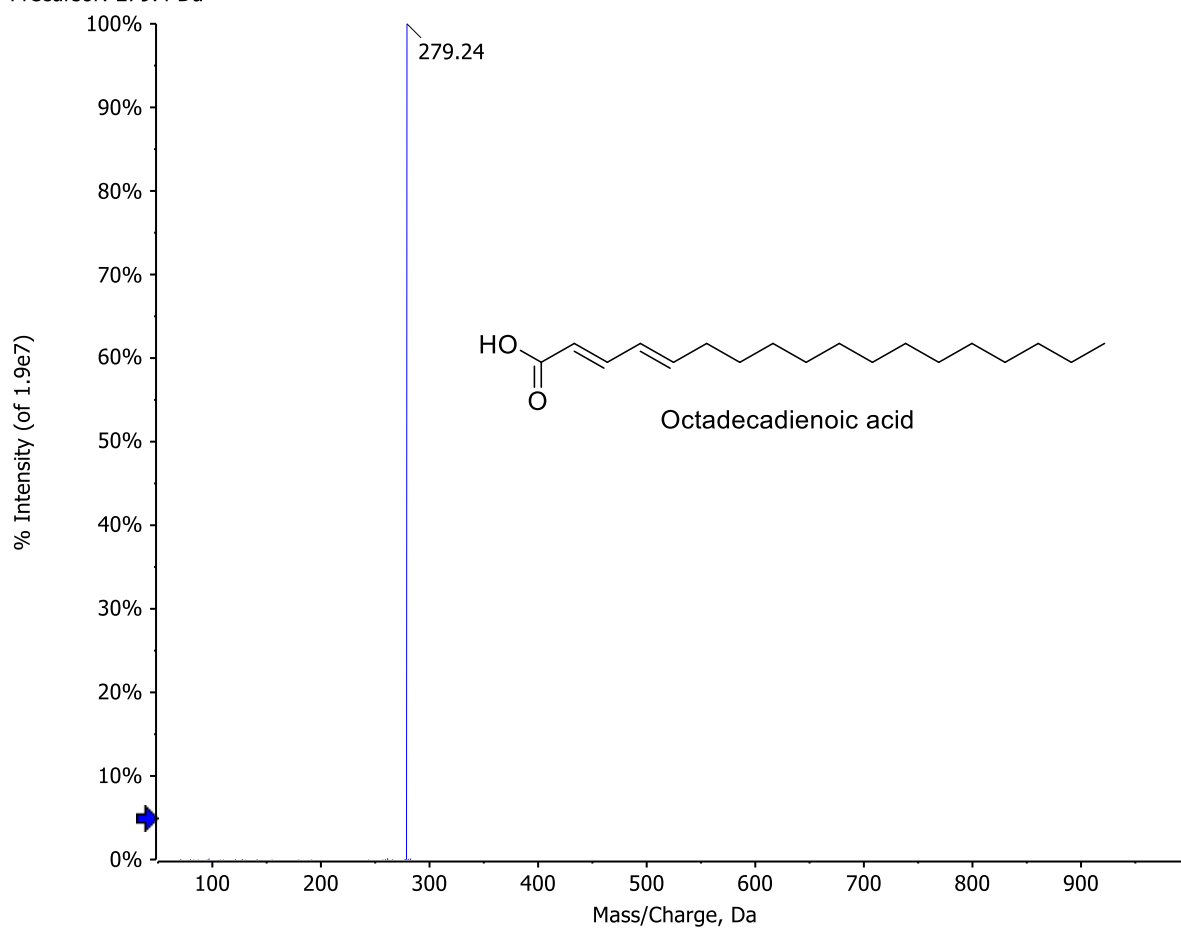


Figure S11: Ms/Ms spectra of Octadecadienoic acid

Spectrum from NS Neg.wiff (sample 1) - NS, Experiment 2, -EPI (50 - 1000) from 38.654 min  
Precursor: 281.8 Da

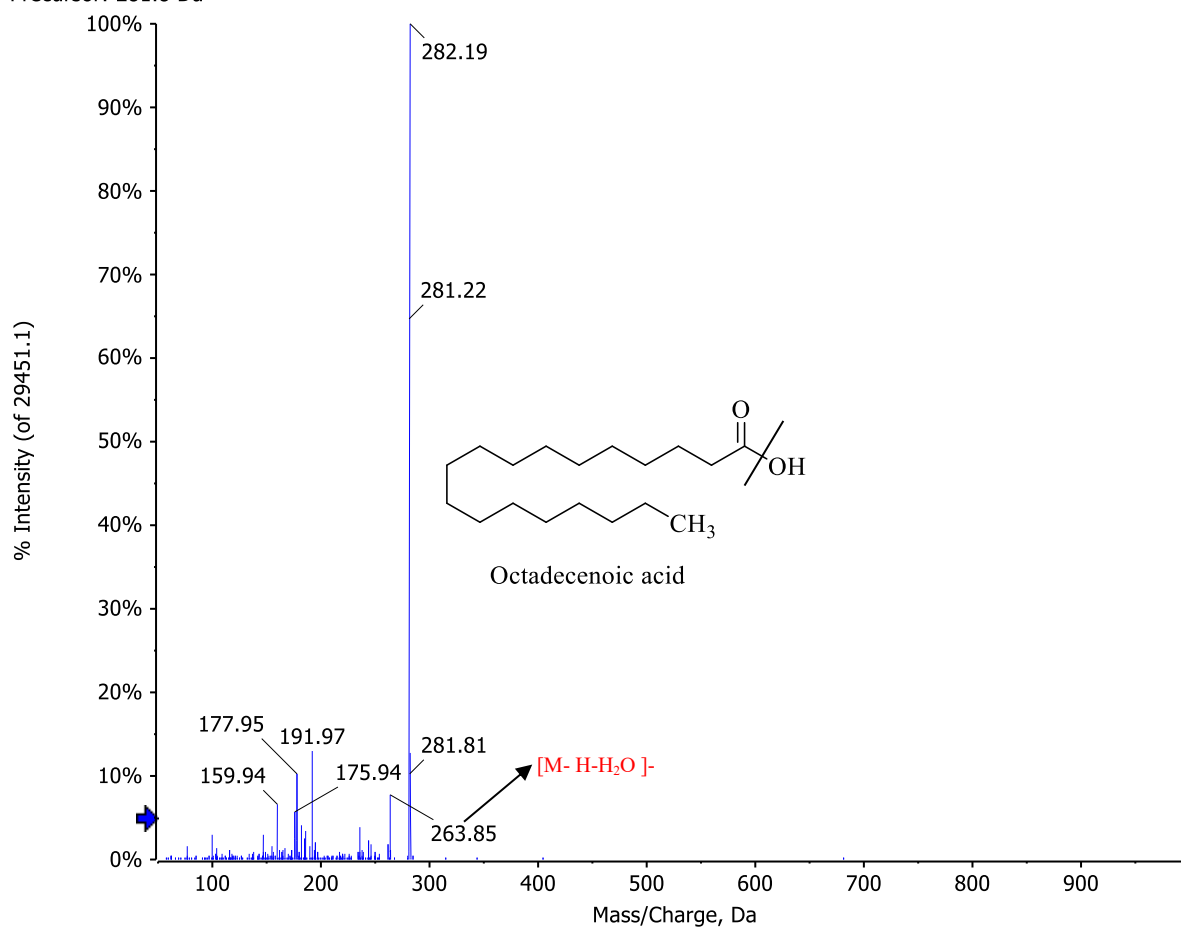


Figure S12: Ms/Ms spectra of Octadecenoic acid



**Figure S13:** Female immature rats (A) Control-ve group treated with saline, the uterus is elongated and thin, and the ovaries are small and contain small numbers of follicles. (B) Control FSH+ve group treated with 20 IU PMSG. The uterine body and horns are wide in diameter and filled with large quantities of fluids, the ovaries are large and contain large numbers of large follicles. (C) *N. sativa* -treated group with dose 100mg /kg b.w. the uterus is thin, and the ovaries contain small numbers of follicles. (D-E) *N. sativa* -treated groups with doses (200 and 400 mg /kg b.w.) the uterine body large in diameter, filled with uterine secretions and the ovaries contained large number of follicles.