

Horse Chestnut saponins – Escins, Isoescins, Transescins, and Desacylescins

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Supporting information

Escin Ia (7.96 min)

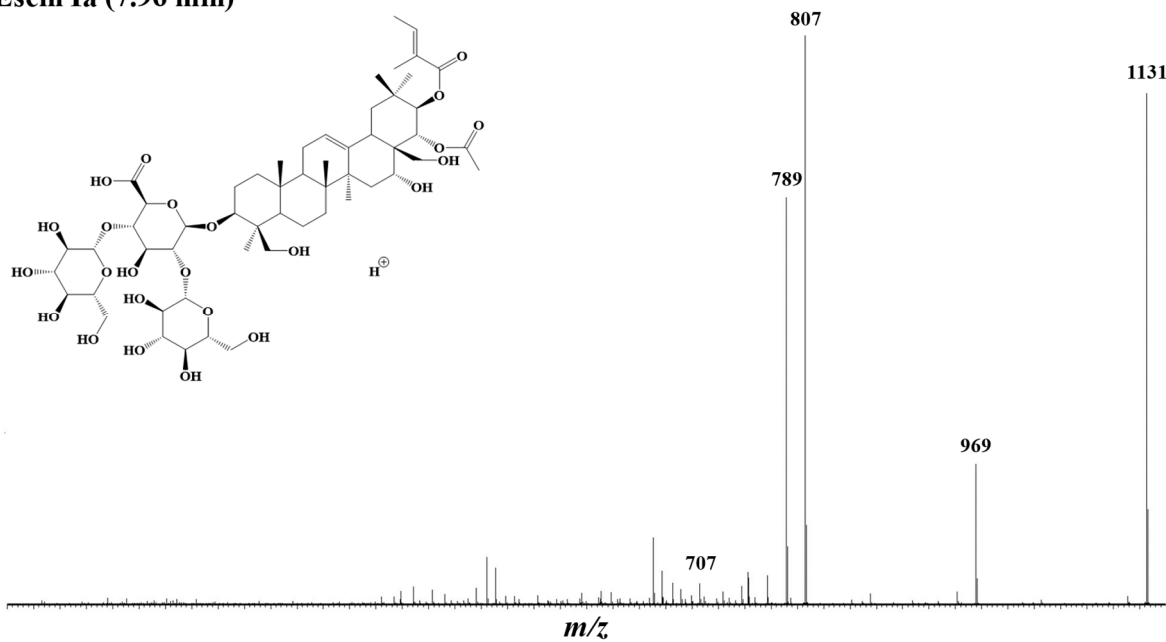


Figure S1: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 7.96 min retention time (Escin Ia)

Escin Ib (8.25 min)

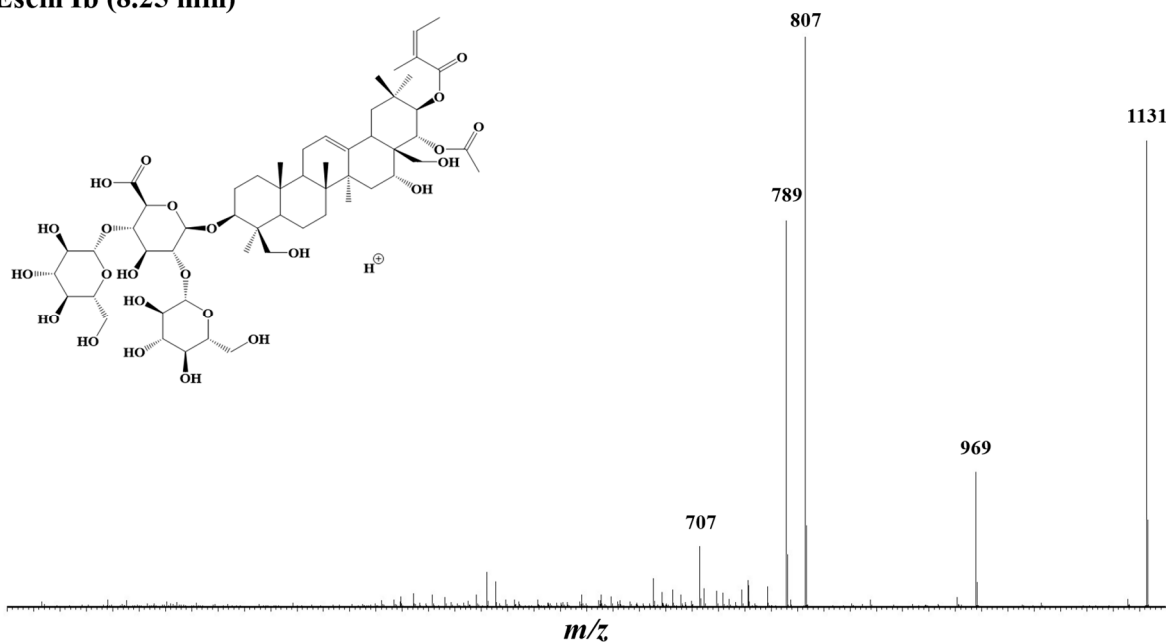


Figure S2: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 8.25 min retention time (Escin Ib)

Isoescsin Ia (8.59 min)

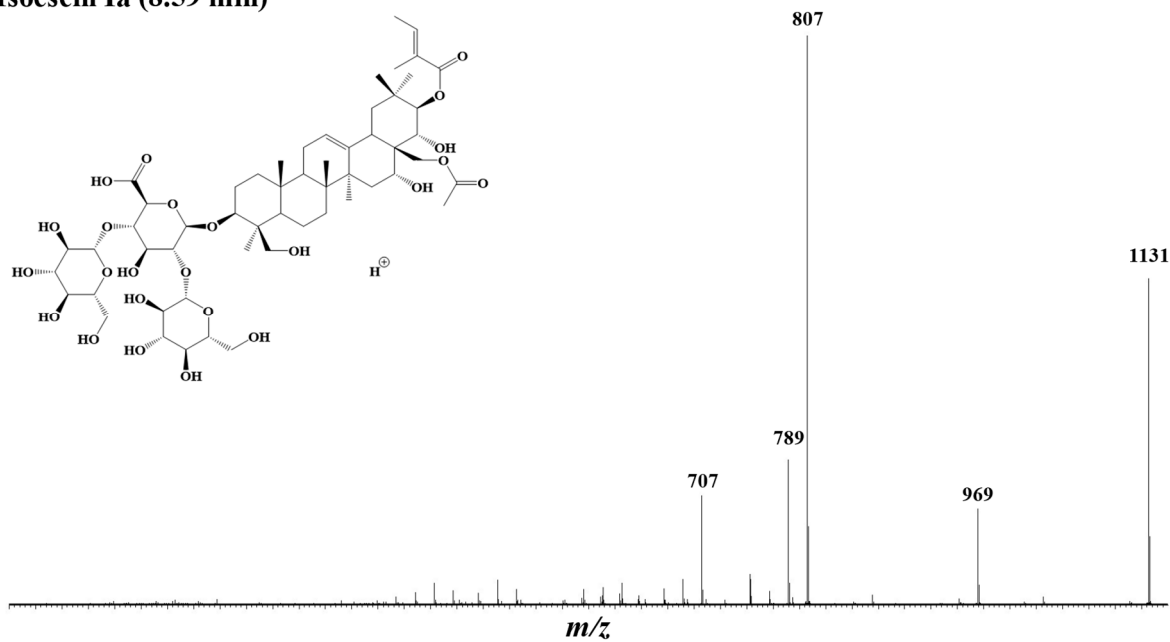


Figure S3: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 8.59 min retention time (Isoescsin Ia)

Isoescsin Ib (8.88 min)

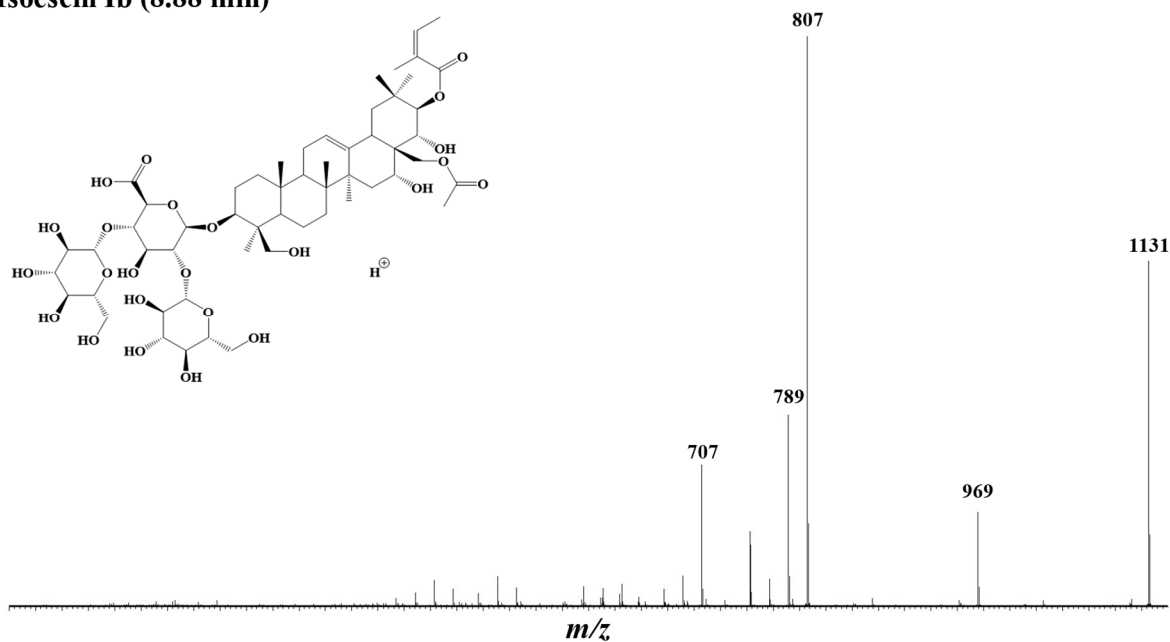


Figure S4: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 8.88 min retention time (Isoescsin Ib)

Transescin Ia (6.59 min)

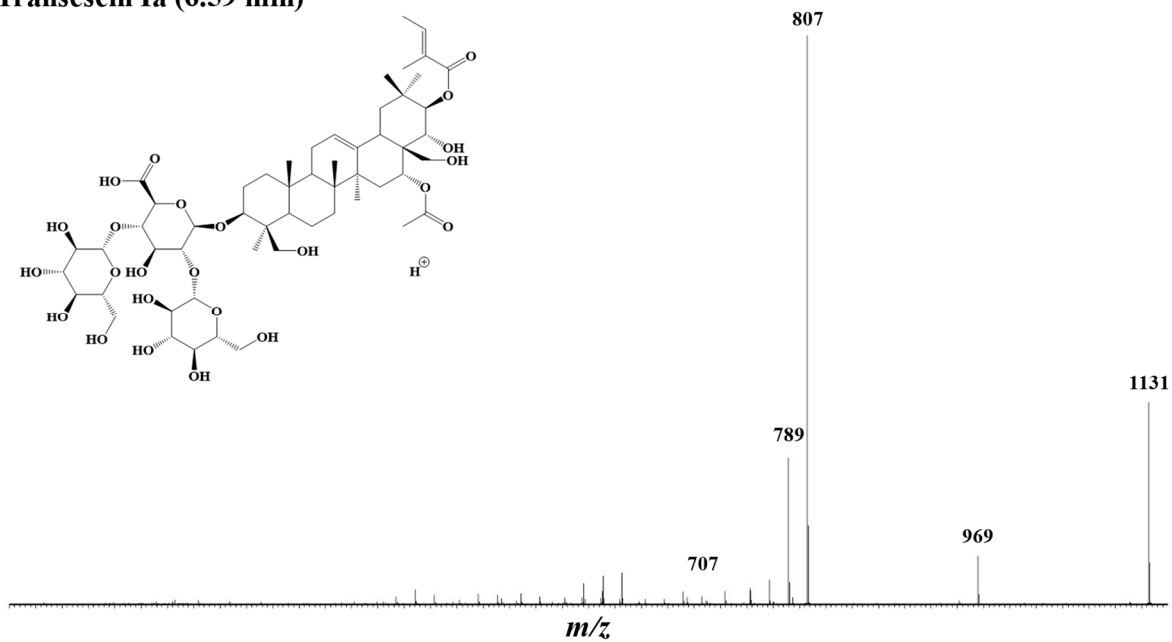


Figure S5: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 6.59 min retention time (Transescin Ia)

Transescin Ib (6.86 min)

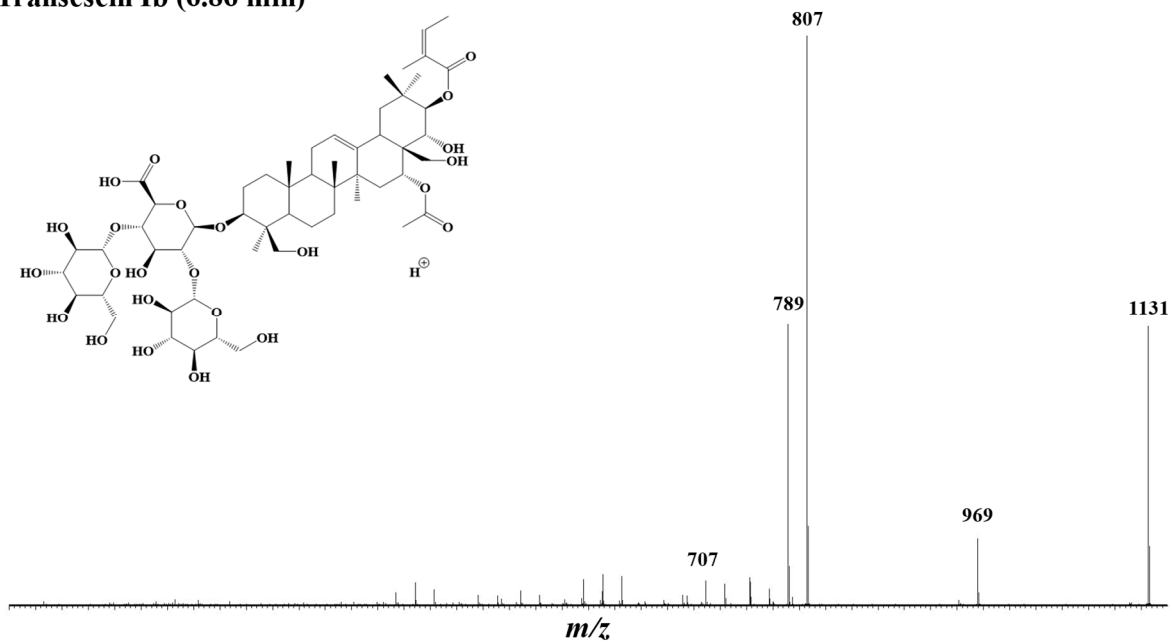


Figure S6: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1131 precursor ions $[M+H]^+$ at 6.86 min retention time (Transescin Ib)

Desacylescin I (5.38 min)

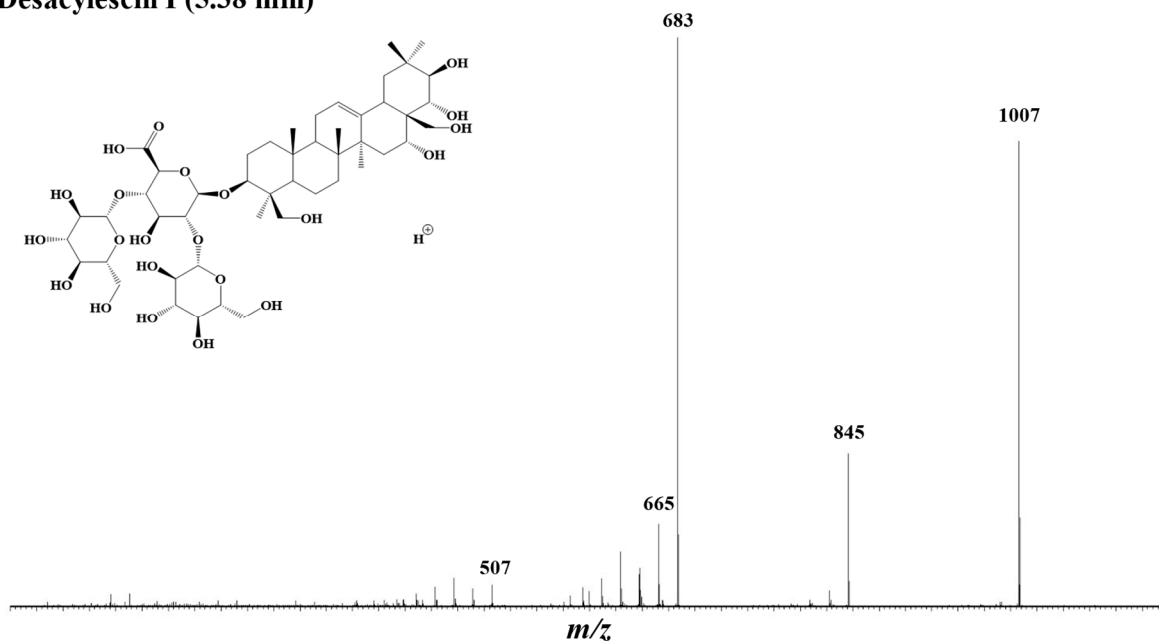


Figure S7: LC-MSMS(+) analysis of Hydrolysis extract (HE): CID spectrum (15 eV) recorded for the m/z 1007 precursor ions $[M+H]^+$ at 5.38 min retention time (Desacylescin I)

Escin IIa (7.98 min)

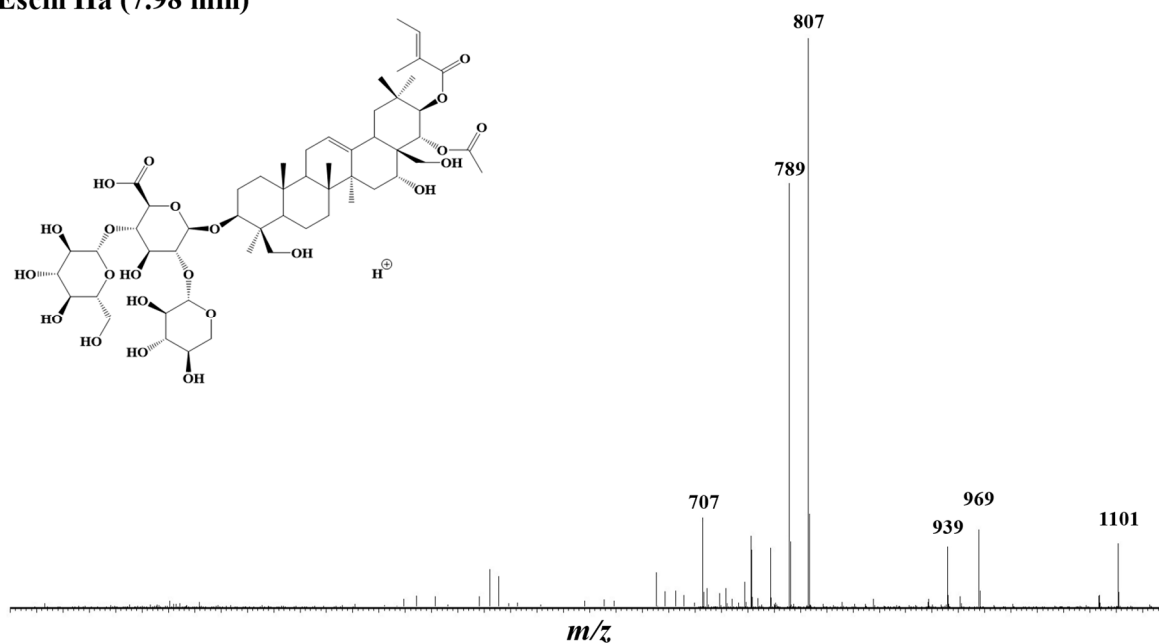


Figure S8: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 7.98 min retention time (Escin IIa)

Escin IIb (8.28 min)

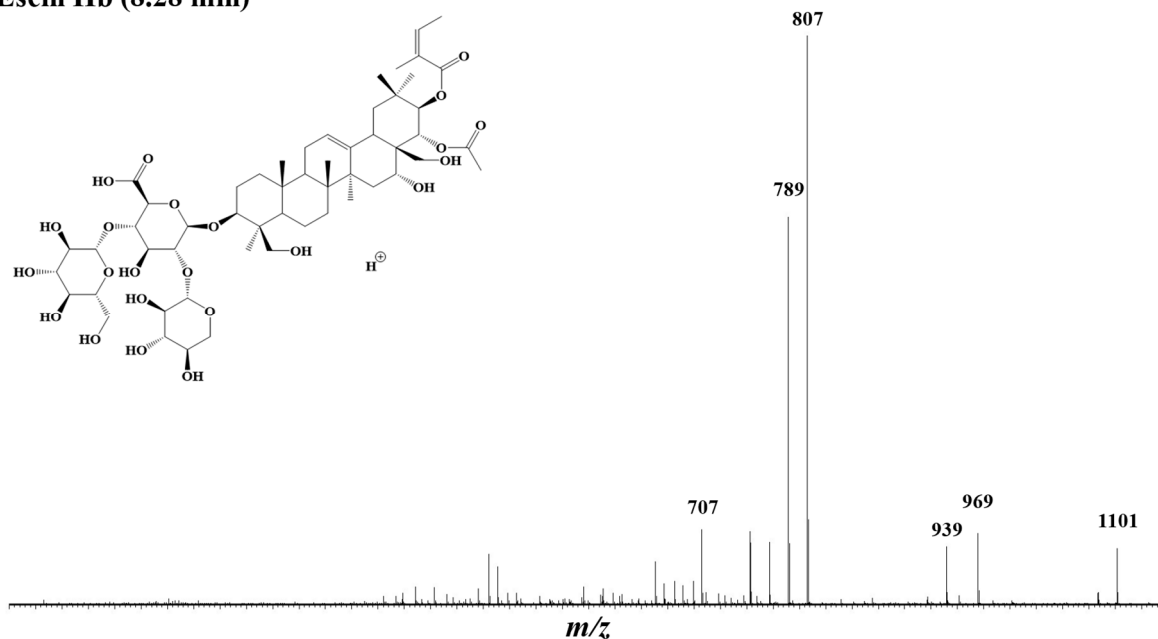


Figure S9: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 8.28 min retention time (Escin IIb)

Isoescsin IIa (8.66 min)

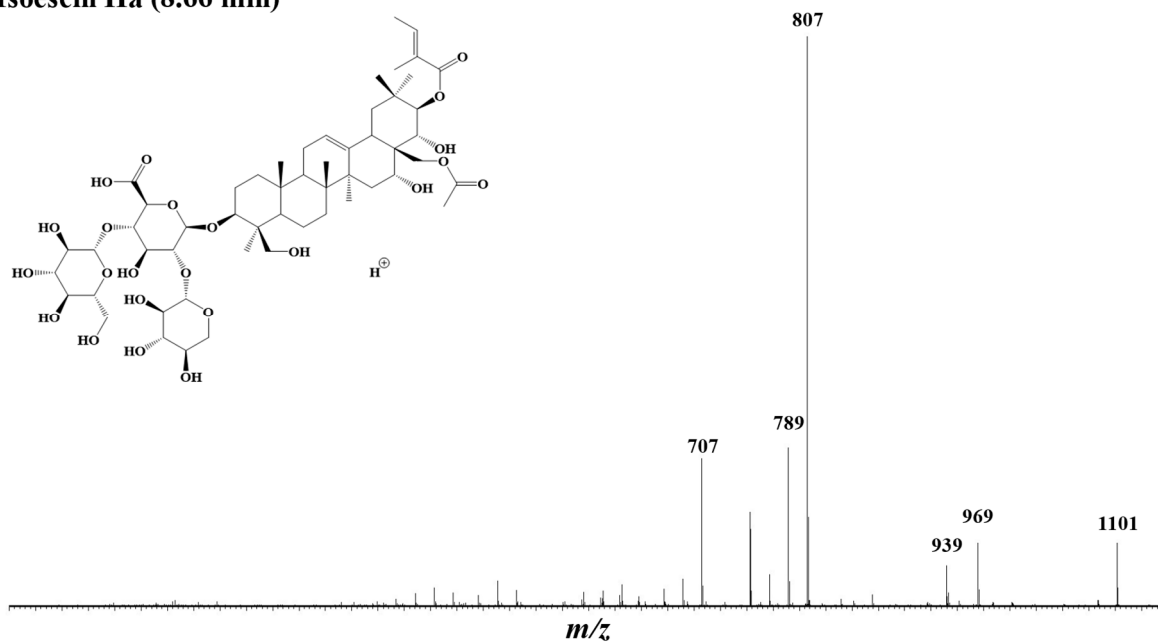


Figure S10: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 8.66 min retention time (Isoescsin IIa)

Isoescsin IIb (8.94 min)

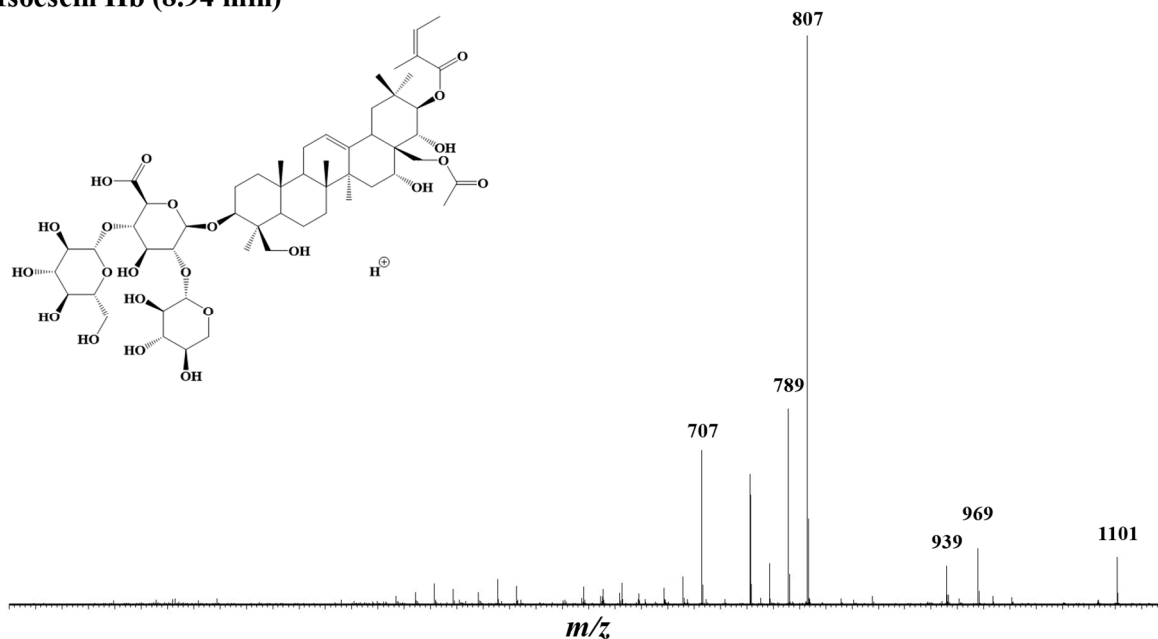


Figure S11: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 8.94 min retention time (Isoescsin IIb)

Transescsin IIa (6.58 min)

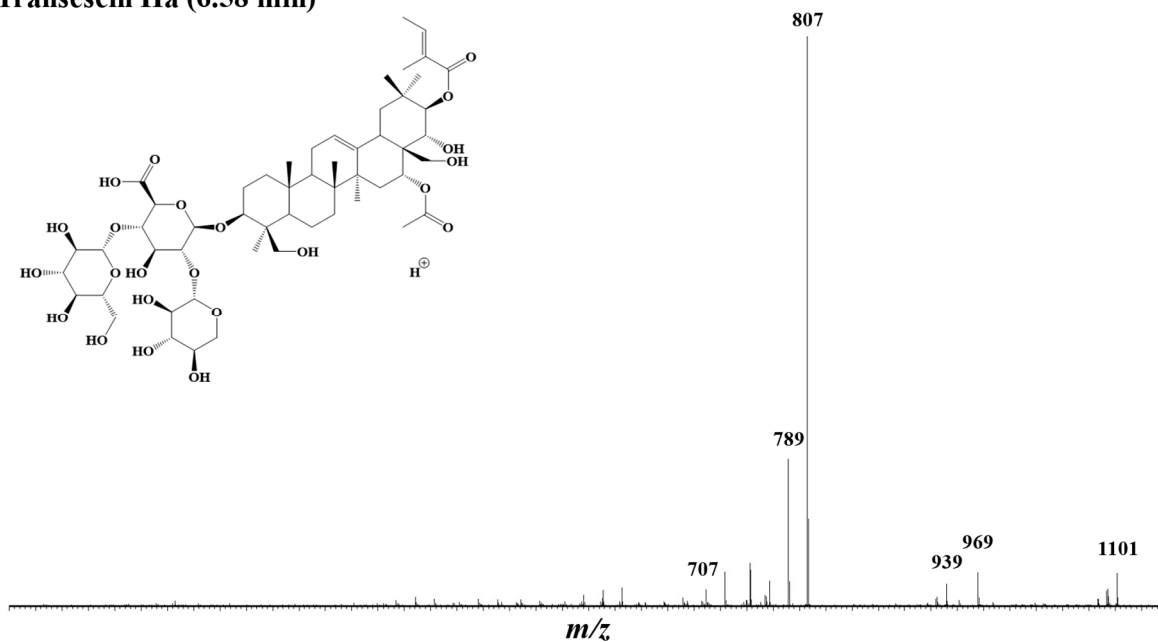


Figure S12: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 6.58 min retention time (Transescsin IIa)

Transescin IIb (6.85 min)

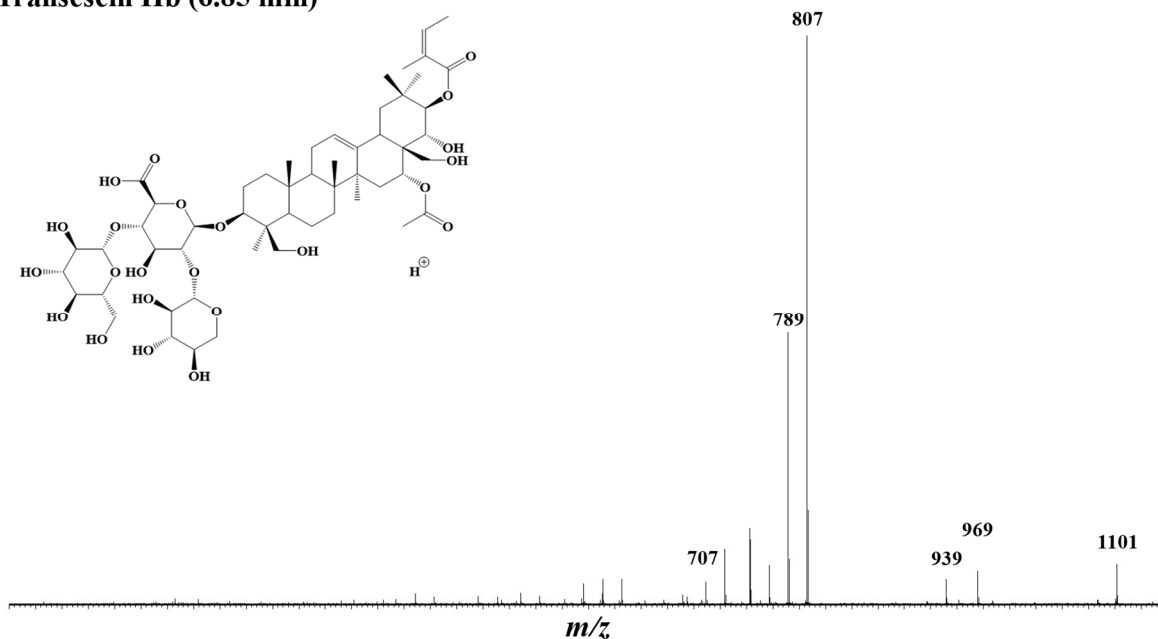


Figure S13: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1101 precursor ions $[M+H]^+$ at 6.85 min retention time (Transescin IIb)

Desacylescins II (5.36 min)

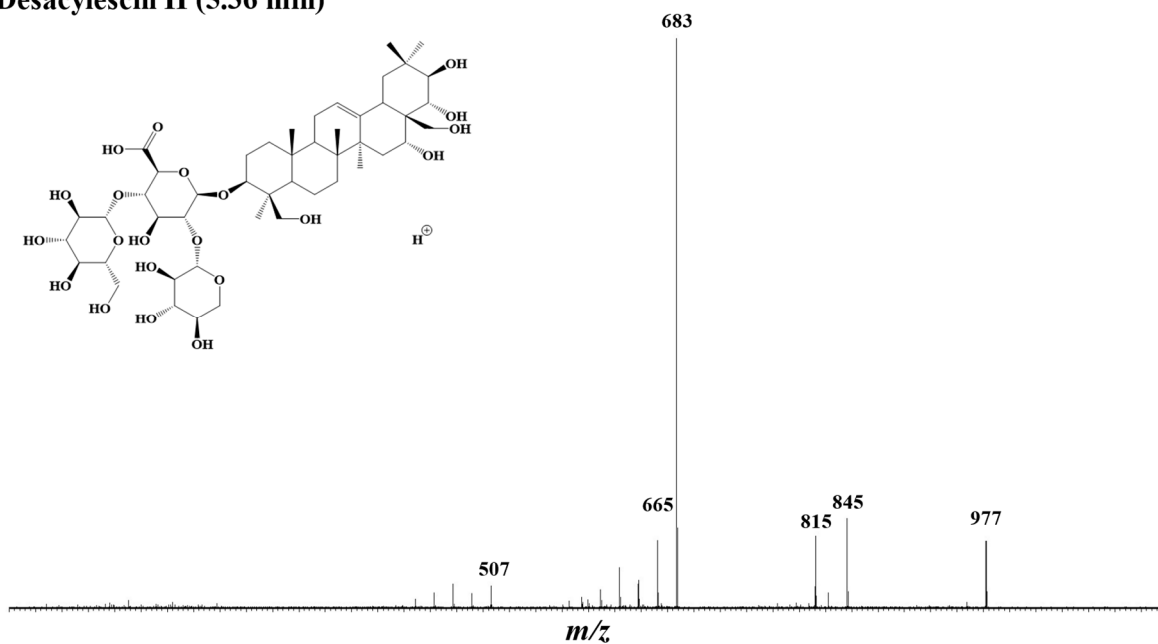


Figure S14: LC-MSMS(+) analysis of Hydrolysis extract (HE): CID spectrum (15 eV) recorded for the m/z 977 precursor ions $[M+H]^+$ at 5.36 min retention time (Desacylescins II)

Escin IIIa (8.45 min)

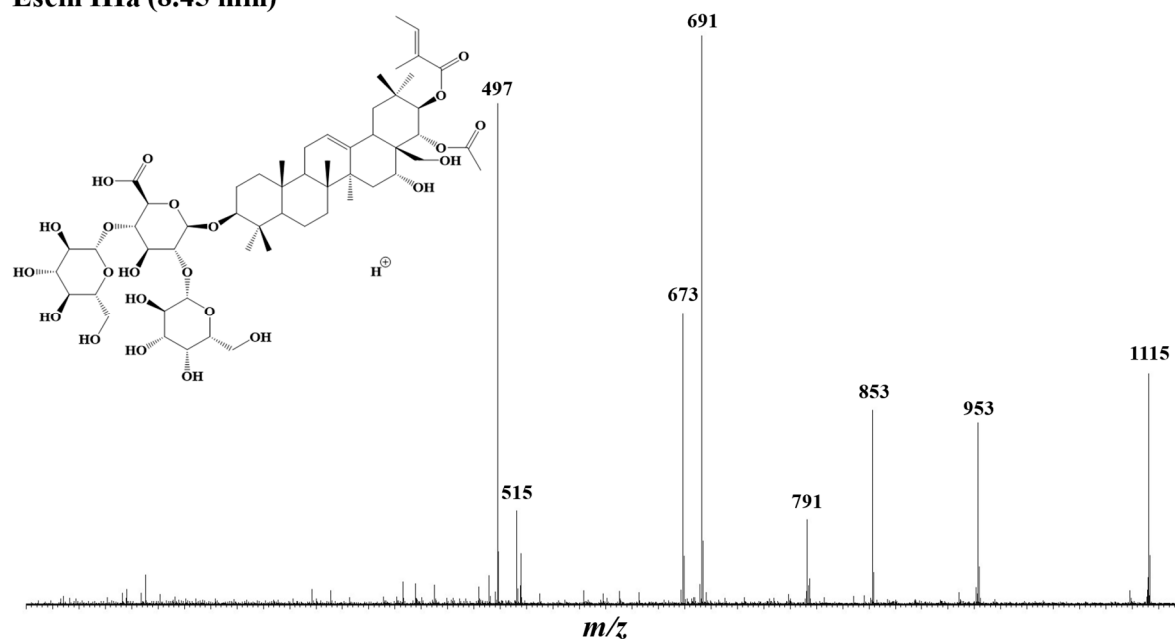


Figure S15: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 8.45 min retention time (Escin IIIa)

Escin IIIb (8.84 min)

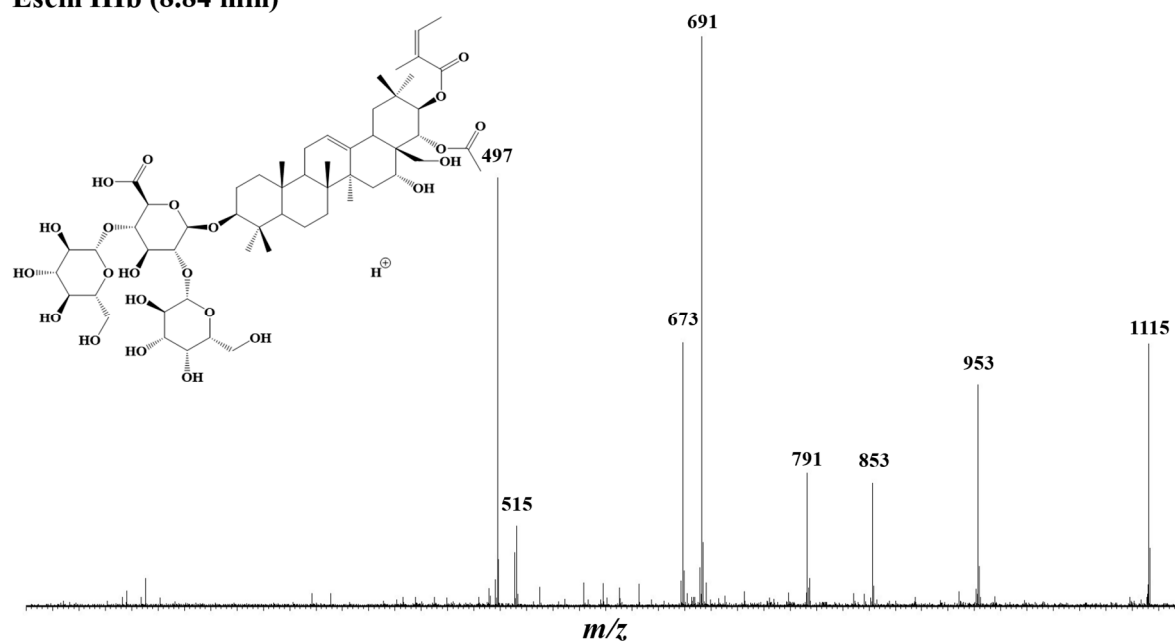


Figure S16: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 8.84 min retention time (Escin IIIb)

Isoescsin IIIa (9.18 min)

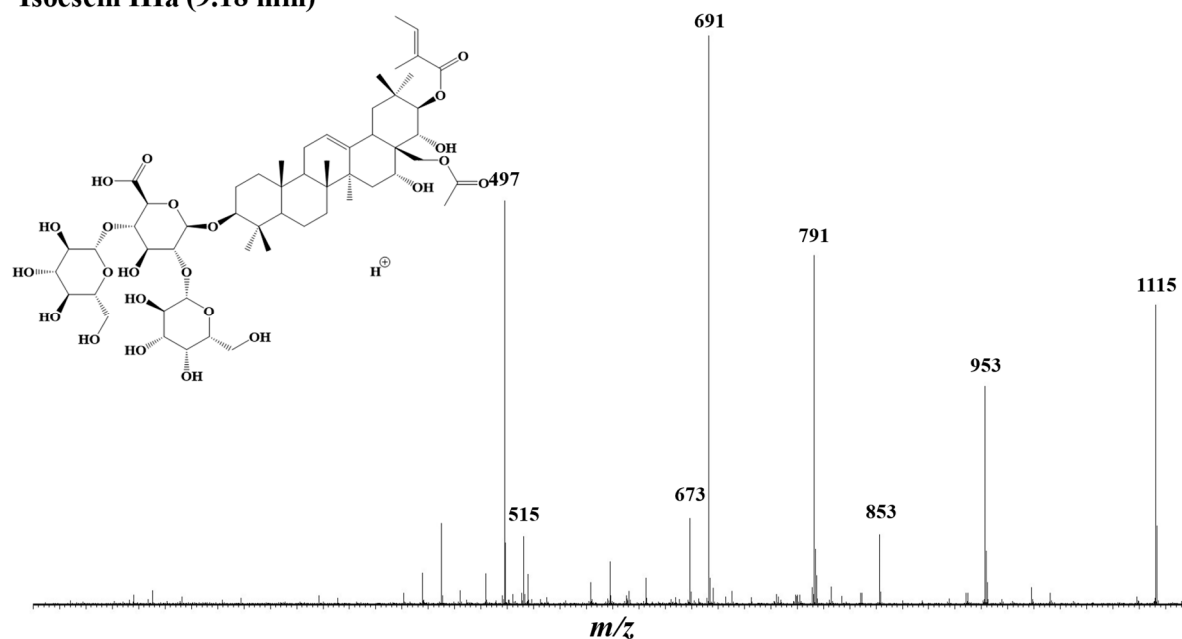


Figure S17: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 9.18 min retention time (Isoescsin IIIa)

Isoescsin IIIb (9.54 min)

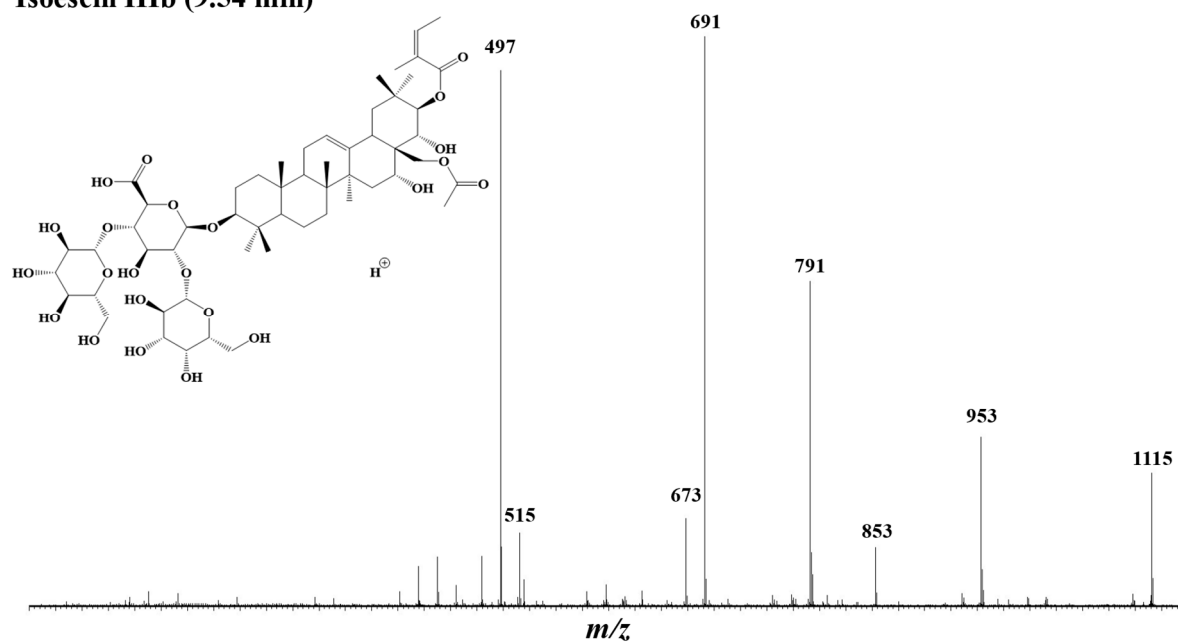


Figure S18: LC-MSMS(+) analysis of Escins I, II and III enriched-extract (EE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 9.54 min retention time (Isoescsin IIIb)

Transescin IIIa (7.00 min)

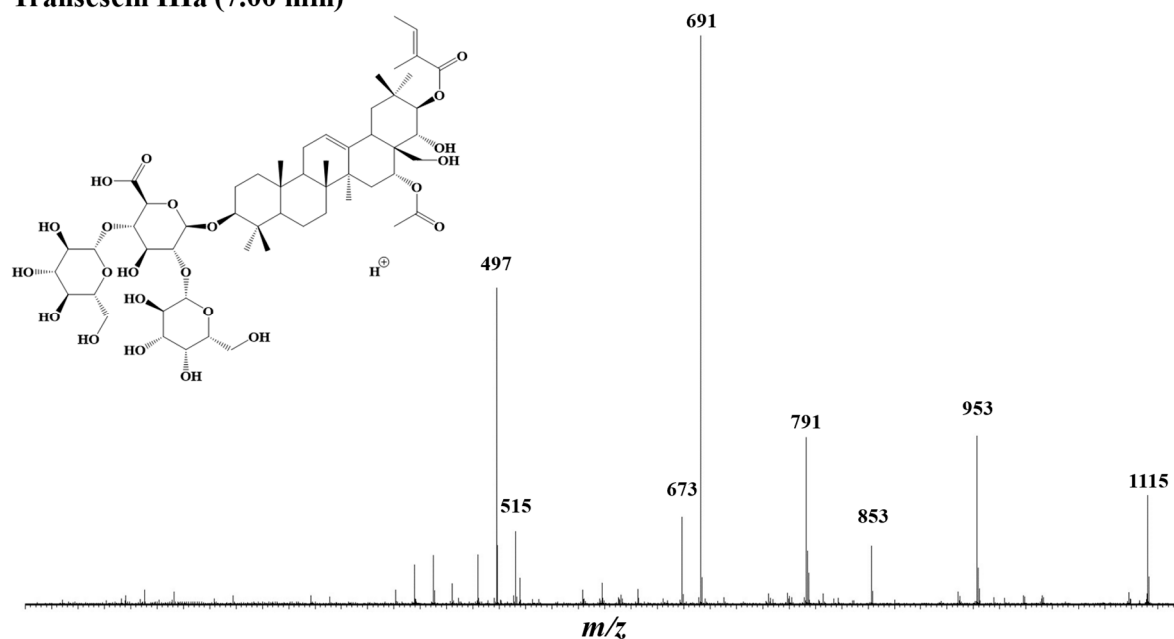


Figure S19: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 7.00 min retention time (Transescin IIIa)

Transescin IIIb (7.27 min)

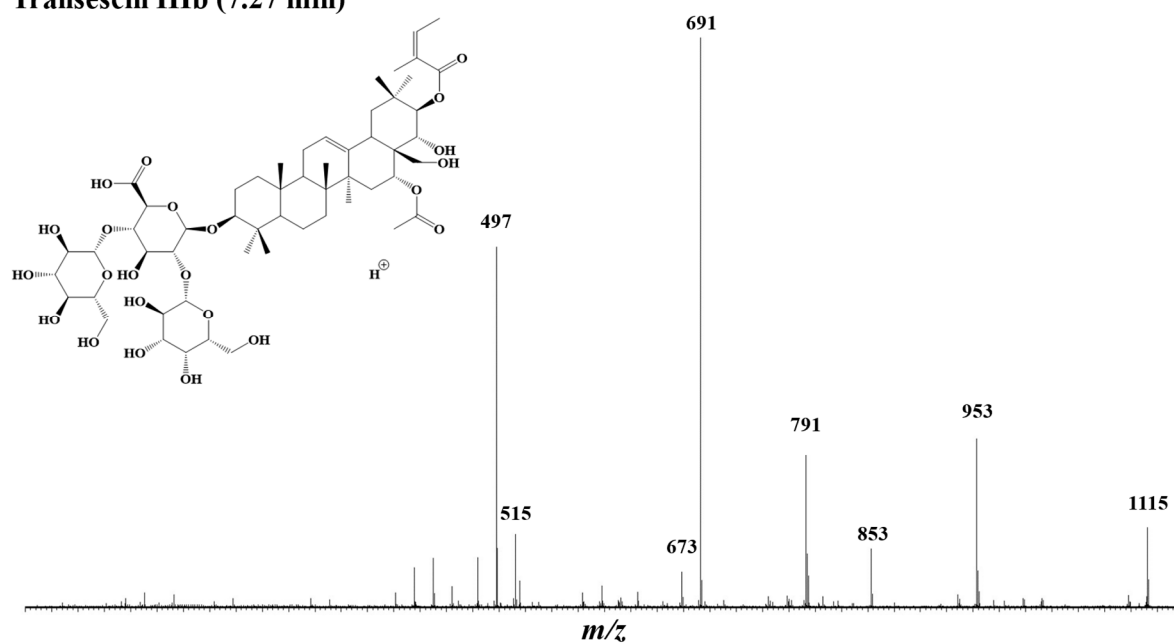


Figure S20: LC-MSMS(+) analysis of Transesterification extract (TE): CID spectrum (15 eV) recorded for the m/z 1115 precursor ions $[M+H]^+$ at 7.27 min retention time (Transescin IIIb)

Desacylescin III (5.39 min)

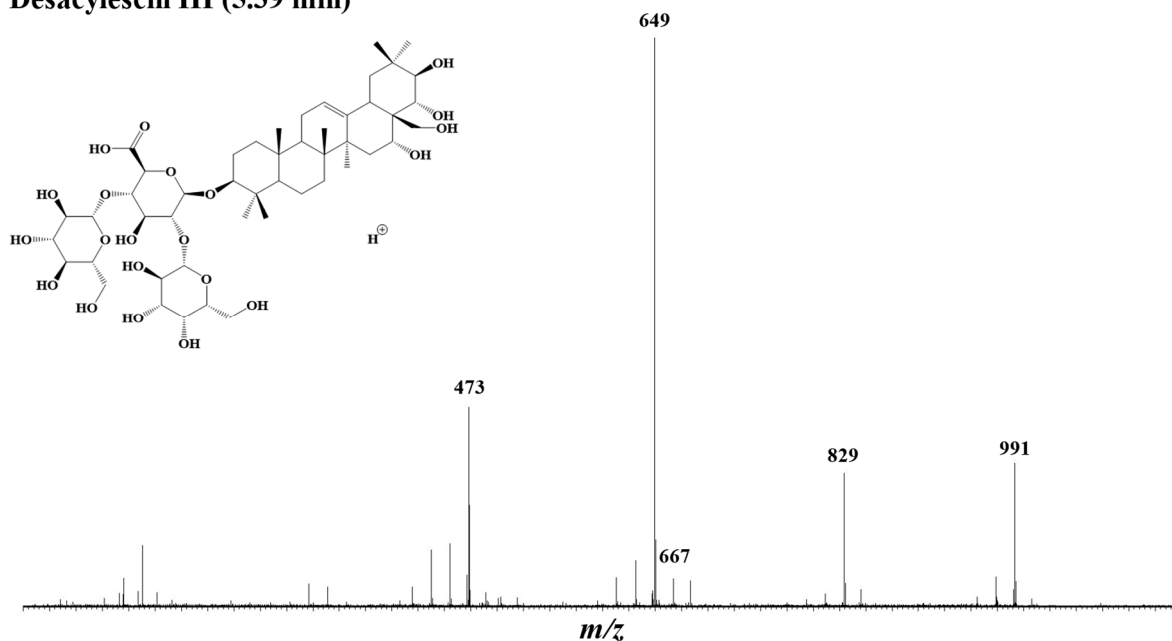


Figure S21: LC-MSMS(+) analysis of Hydrolysis extract (HE): CID spectrum (15 eV) recorded for the m/z 991 precursor ions $[M+H]^+$ at 5.39 min retention time (Desacylescin III)

Escin IV (6.10 min)

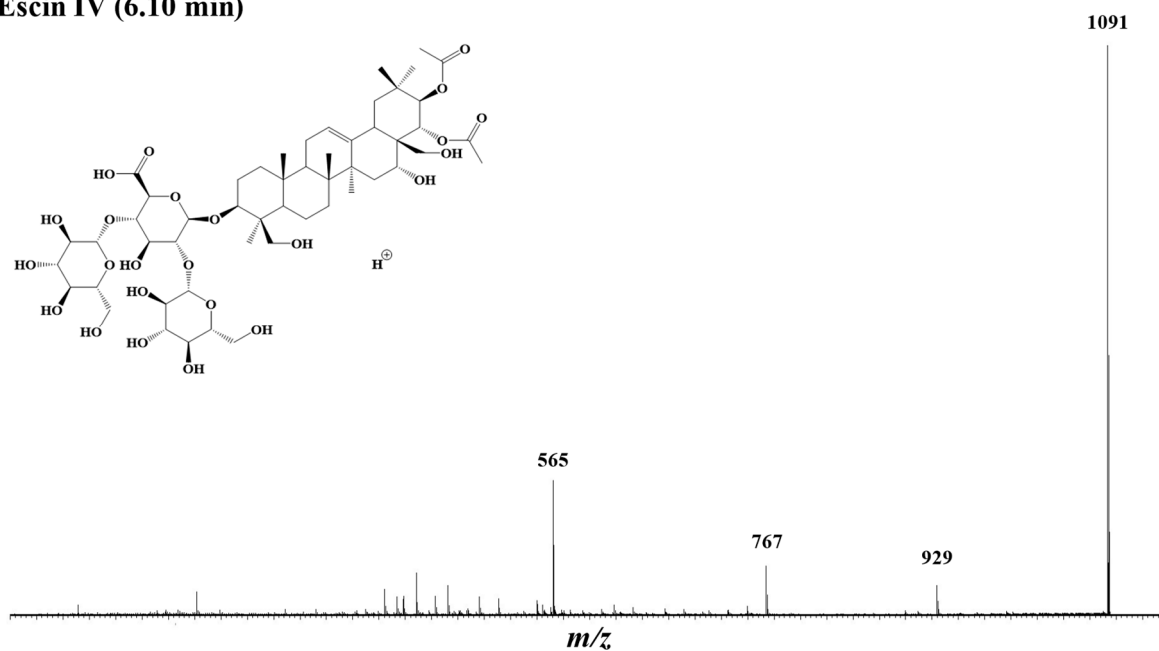


Figure S22: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1091 precursor ions $[M+H]^+$ at 6.10 min retention time (Escin IV)

Isoescsin IV (6.56 min)

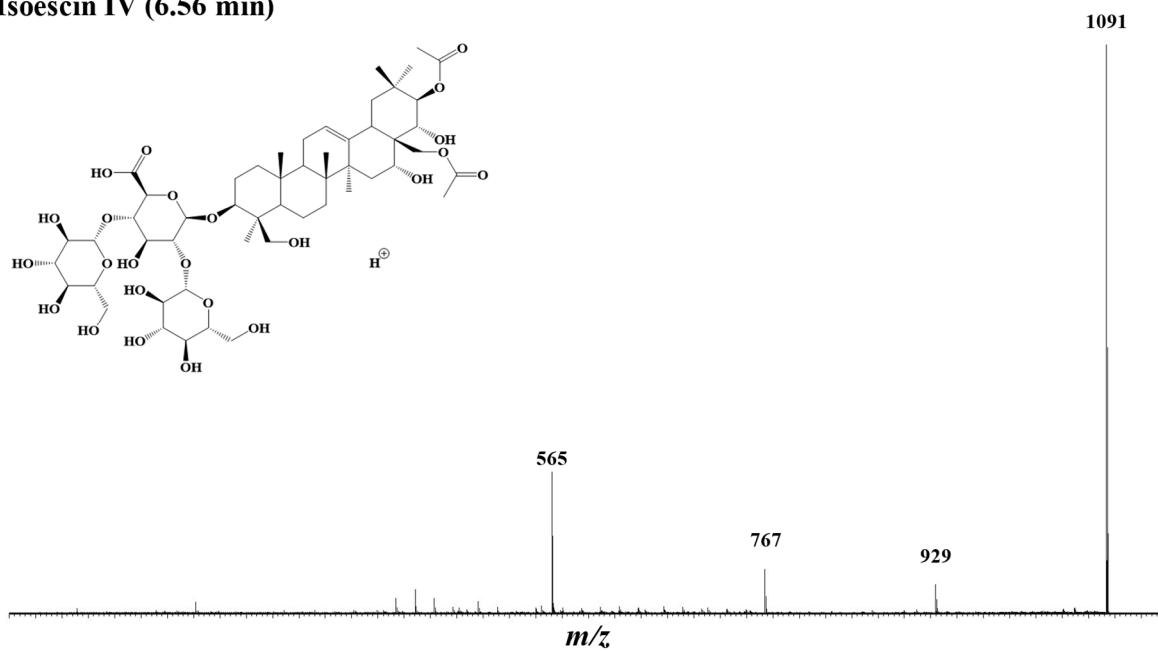


Figure S23: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1091 precursor ions $[M+H]^+$ at 6.56 min retention time (Isoescsin IV)

Escin V (7.71 min)

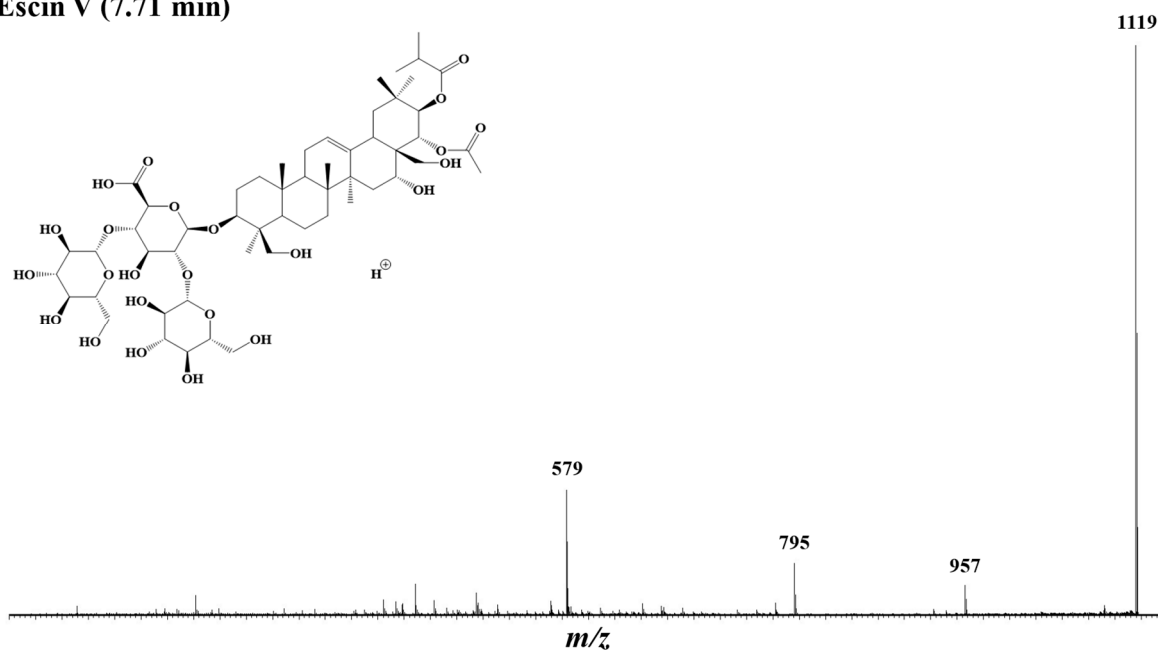


Figure S24: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1119 precursor ions $[M+H]^+$ at 7.71 min retention time (Escin V)

Isoescsin V (8.20 min)

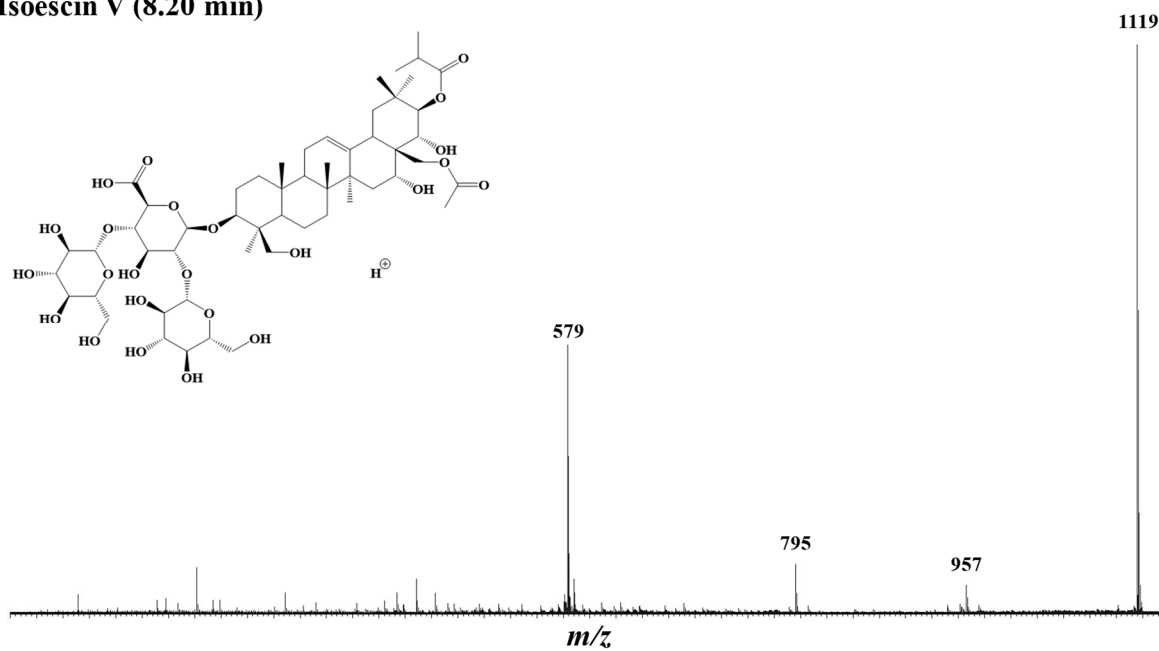


Figure S25: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1119 precursor ions $[M+H]^+$ at 8.20 min retention time (Isoescsin V)

Escin VI (8.62 min)

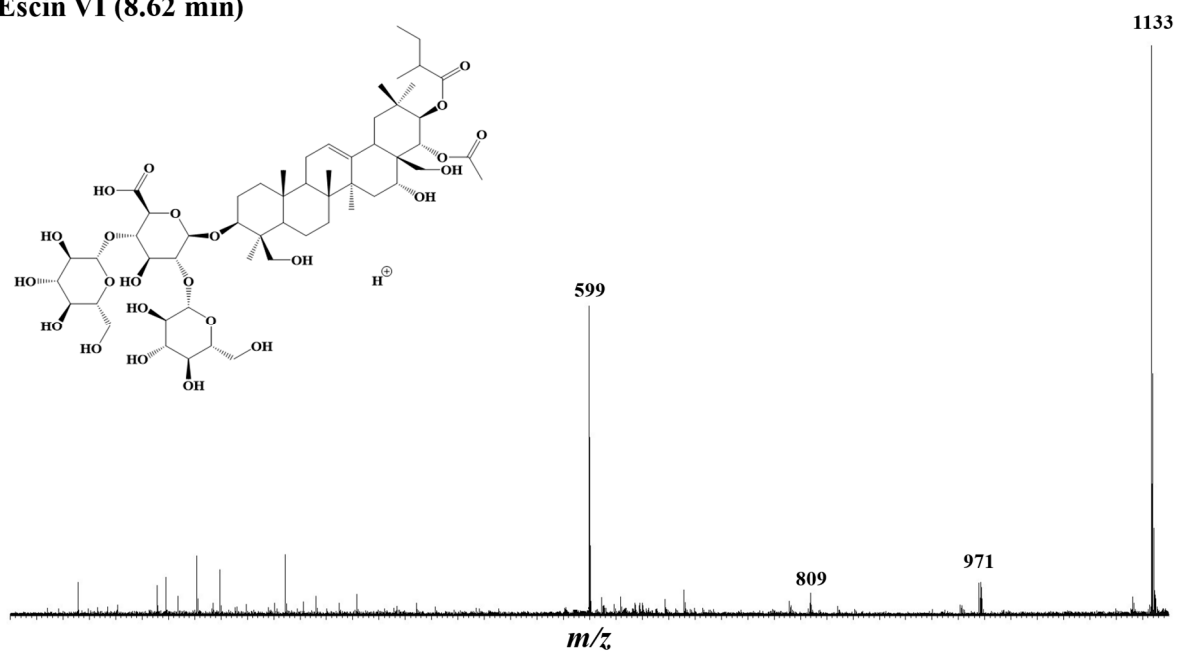


Figure S26: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1133 precursor ions $[M+H]^+$ at 8.62 min retention time (Escin VI)

Isoescsin VI (9.47 min)

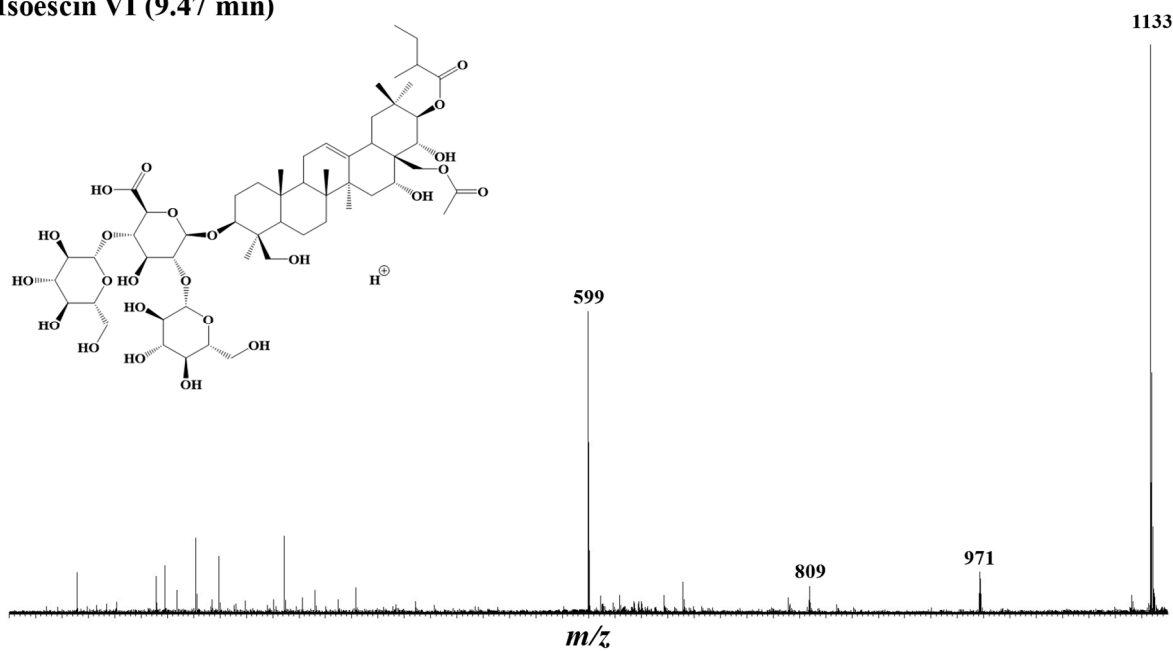


Figure S27: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1133 precursor ions $[M+H]^+$ at 9.47 min retention time (Isoescsin VI)

Escsin VII (6.12 min)

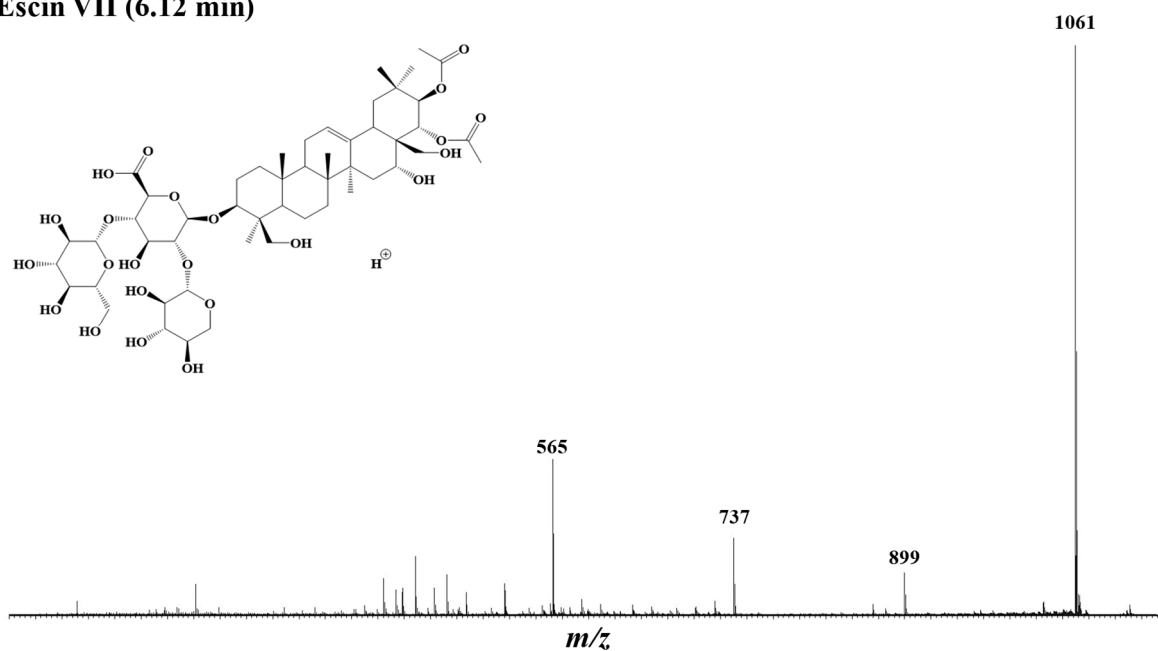


Figure S28: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1061 precursor ions $[M+H]^+$ at 6.12 min retention time (Escsin VII)

Isoescsin VII (6.59 min)

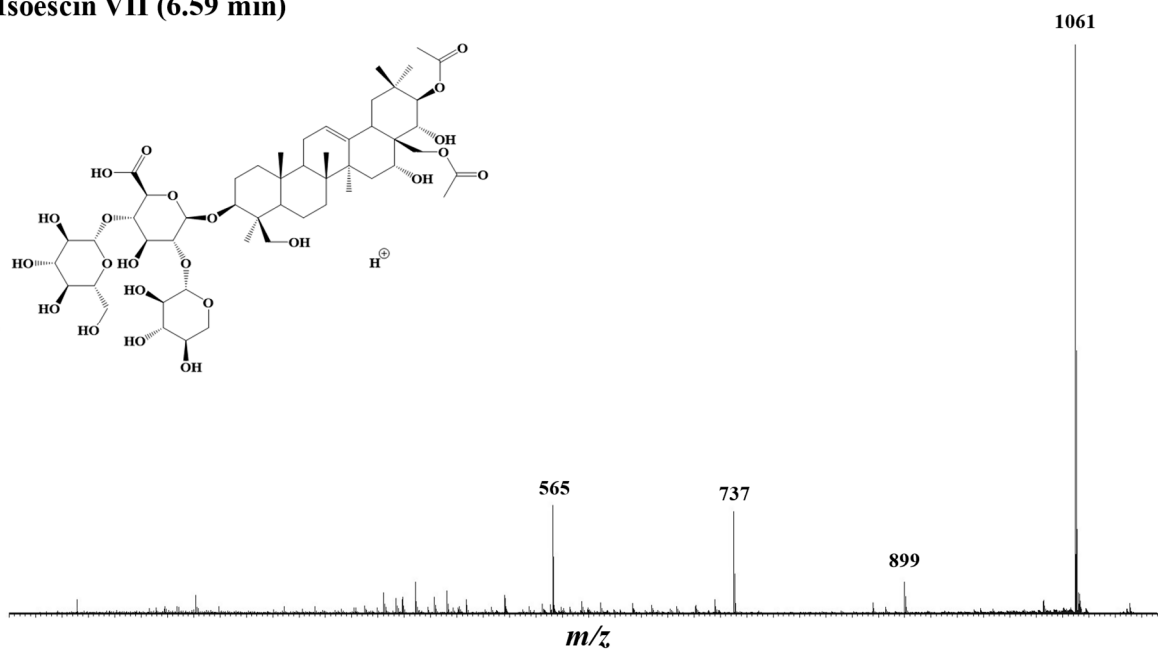


Figure S29: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1061 precursor ions $[M+H]^+$ at 6.59 min retention time (Isoescsin VII)

Escin VIII (7.42 min)

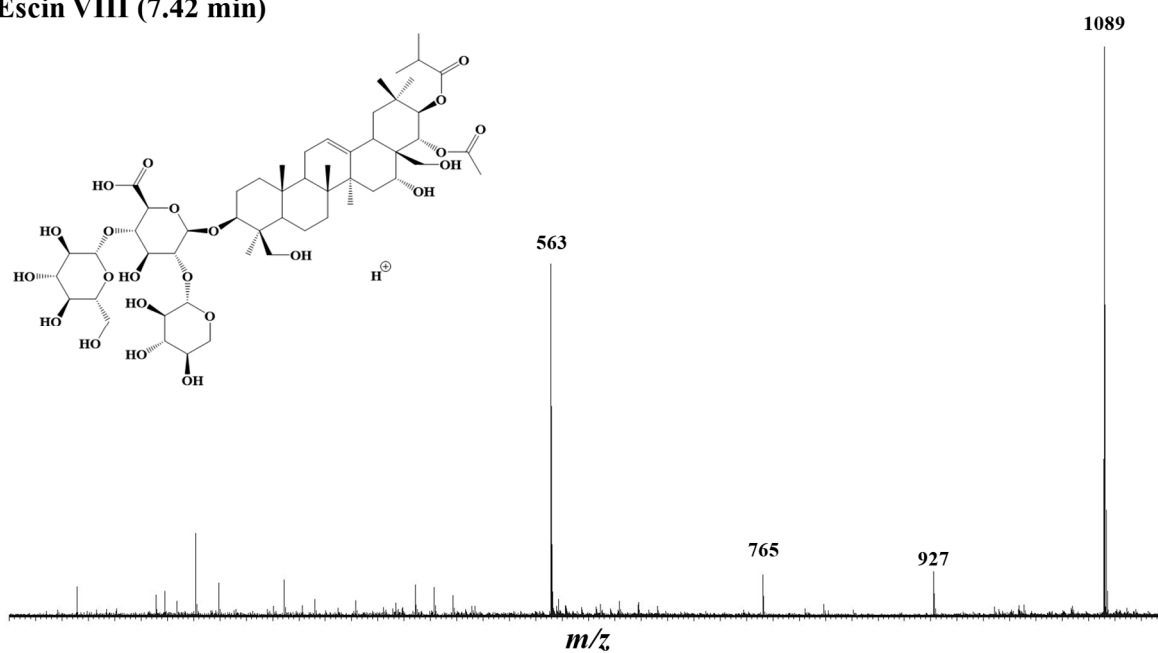


Figure S30: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1089 precursor ions $[M+H]^+$ at 7.42 min retention time (Escin VIII)

Isoescsin VIII (7.64 min)

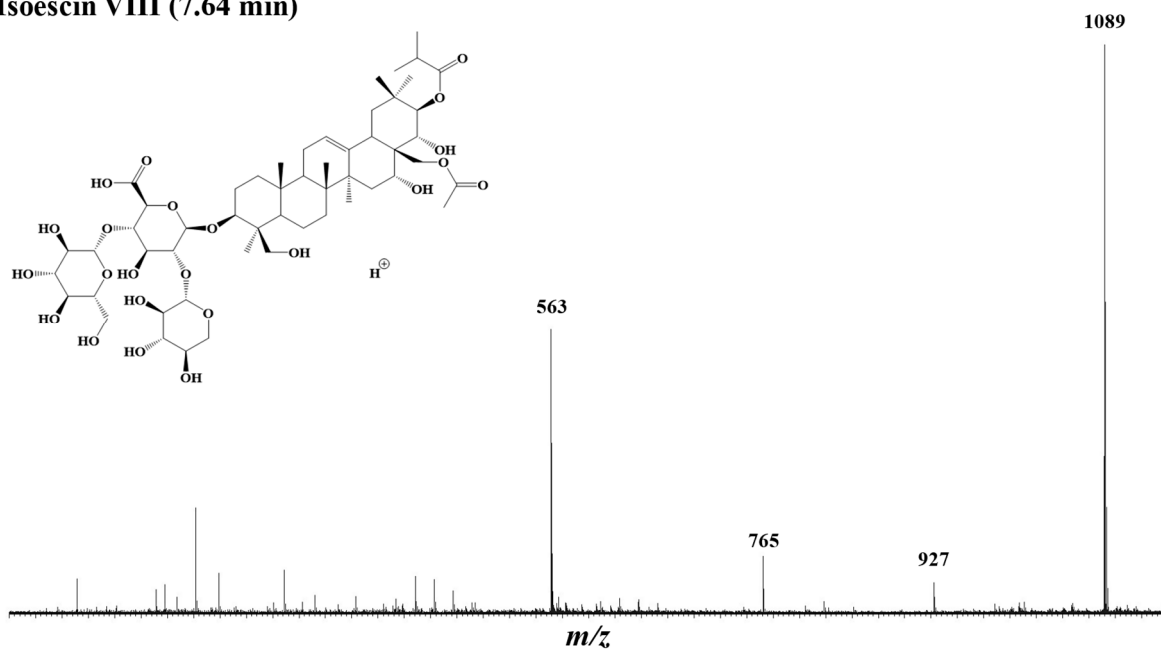


Figure S31: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1089 precursor ions $[M+H]^+$ at 7.64 min retention time (Isoescsin VIII)

Escin IX (6.44 min)

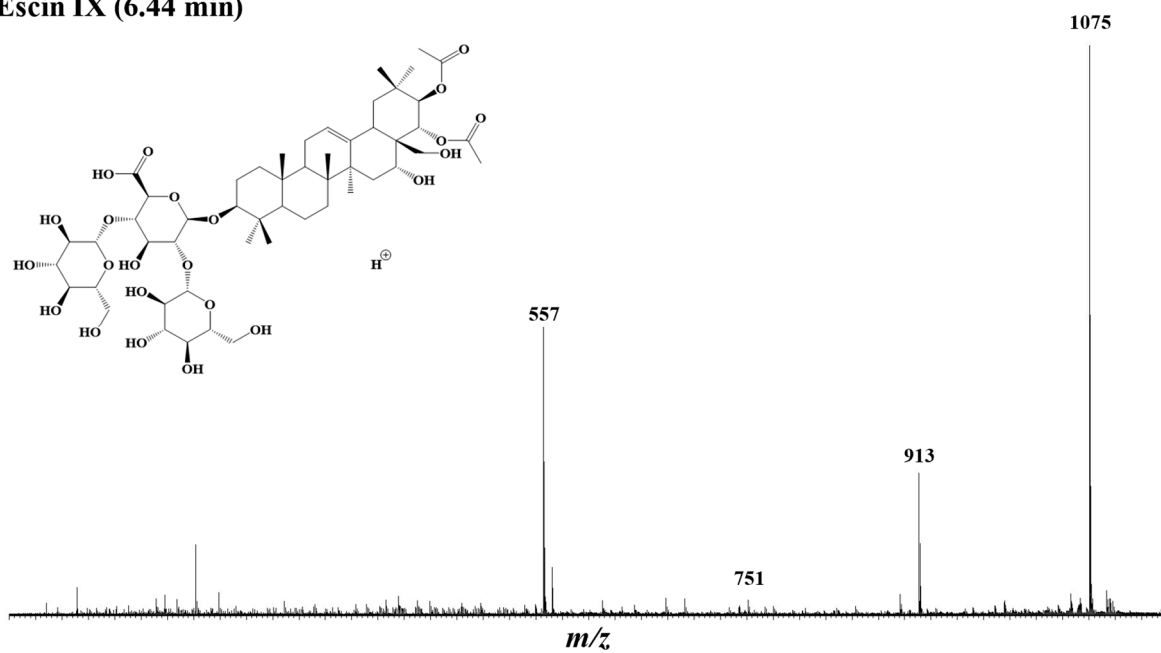


Figure S32: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1075 precursor ions $[M+H]^+$ at 6.44 min retention time (Escin IX)

Isoescsin IX (6.83 min)

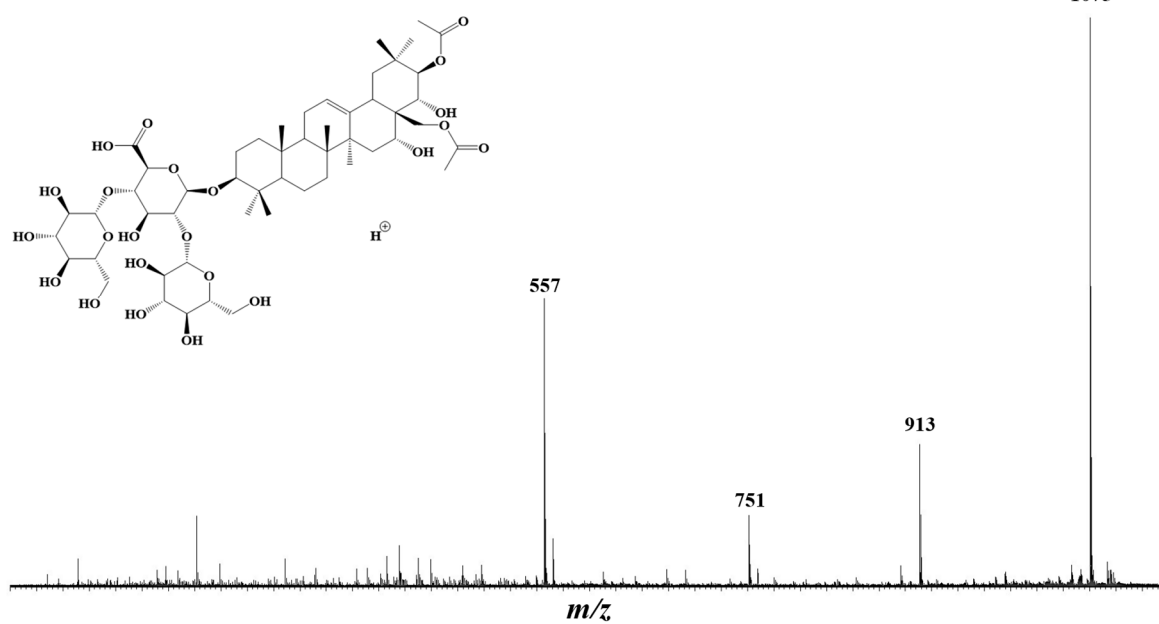


Figure S33: LC-MSMS(+) analysis of Natural extract (NE): CID spectrum (15 eV) recorded for the m/z 1075 precursor ions $[M+H]^+$ at 6.83 min retention time (Isoescsin IX)