Supporting Information

Rec. Nat. Prod. **14:1 (2020) 83-88**

Natural Glycosides from *Indigofera stachyoides radix*

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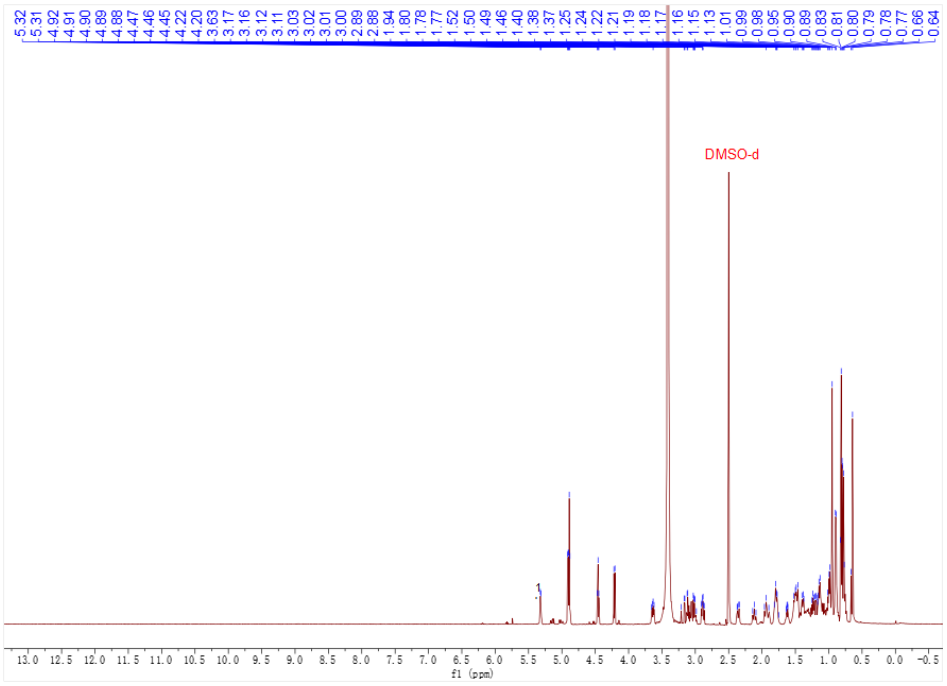

Figure S1: ^{1}H-NMR (500 MHz, DMSO-*d*6) spectrum of compound **1** (β-sitosterol-D-glucoside)

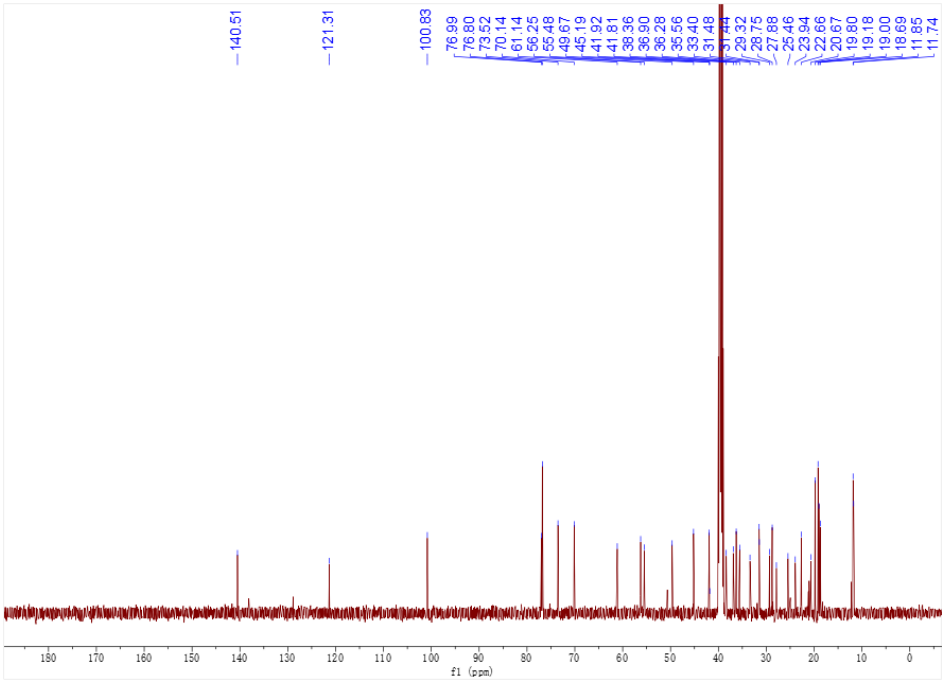

Figure S2: ^{13}C NMR (126 MHz, DMSO-*d*6) spectrum of compound **1** (β-sitosterol-D-glucoside)

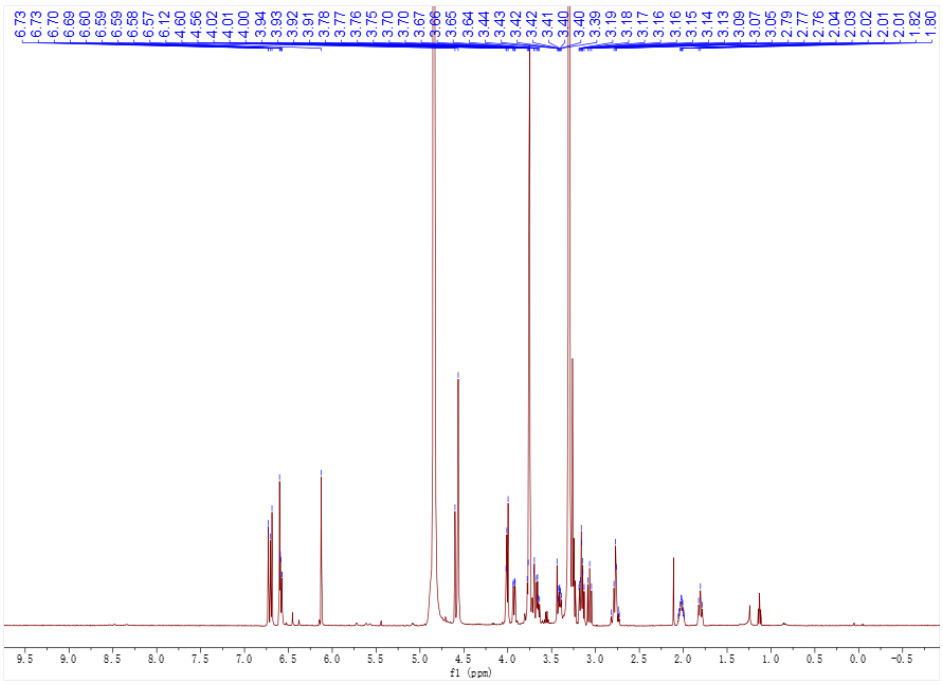

Figure S3: ^{1}H NMR (500 MHz, CD_3OD) spectrum of compound **2** (schizandriside)

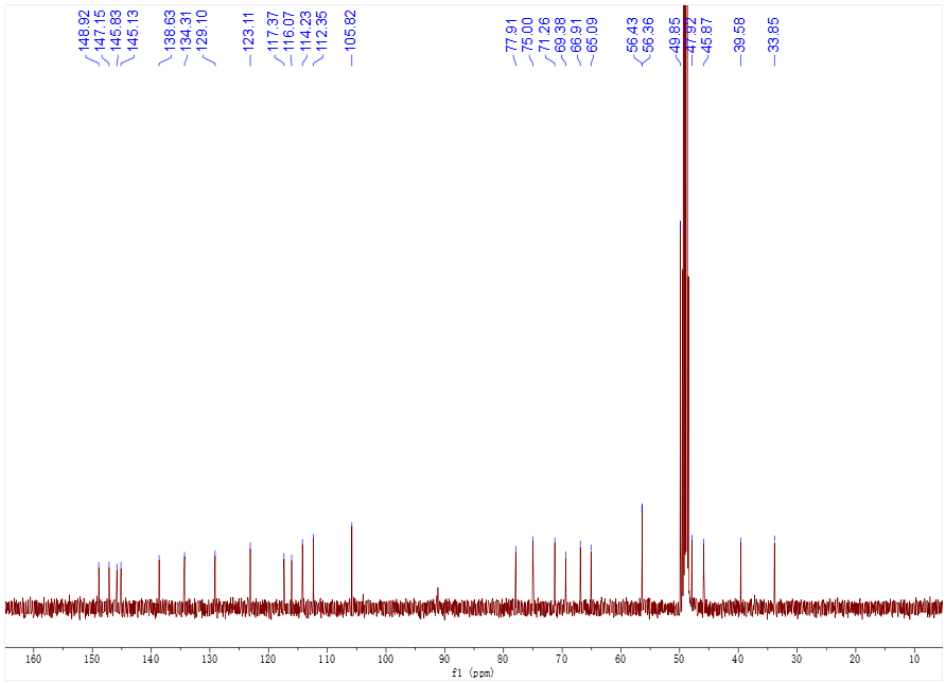

Figure S4: ^{13}C NMR (126 MHz, CD_3OD) spectrum of compound **2** (schizandriside)

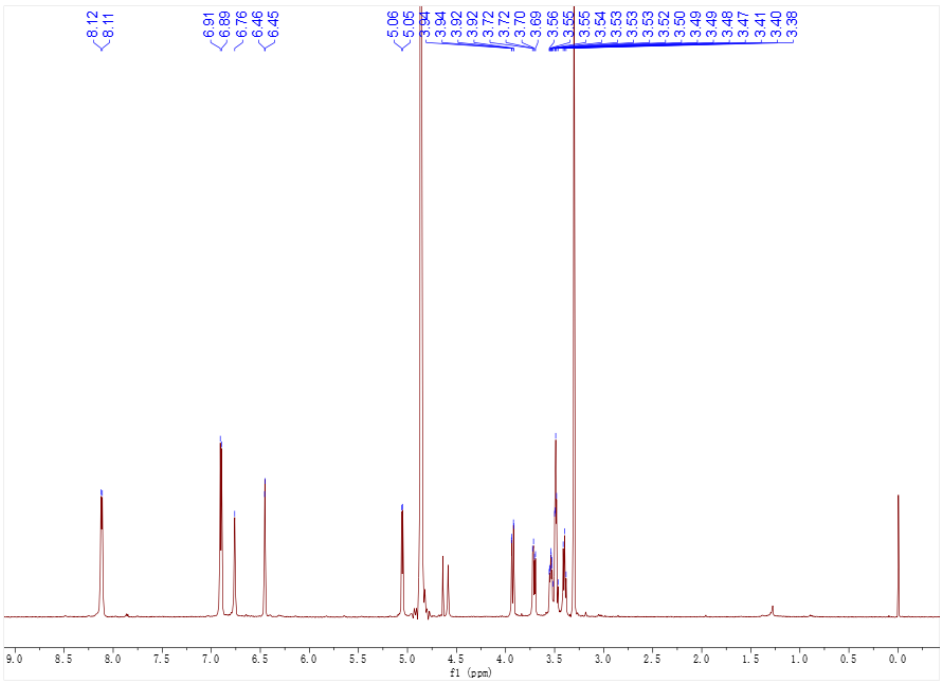

Figure S5: ^{1}H NMR (600 MHz, CD_3OD) spectrum of compound **3** (kaempferol-7-O-β-D-glucopyranoside)

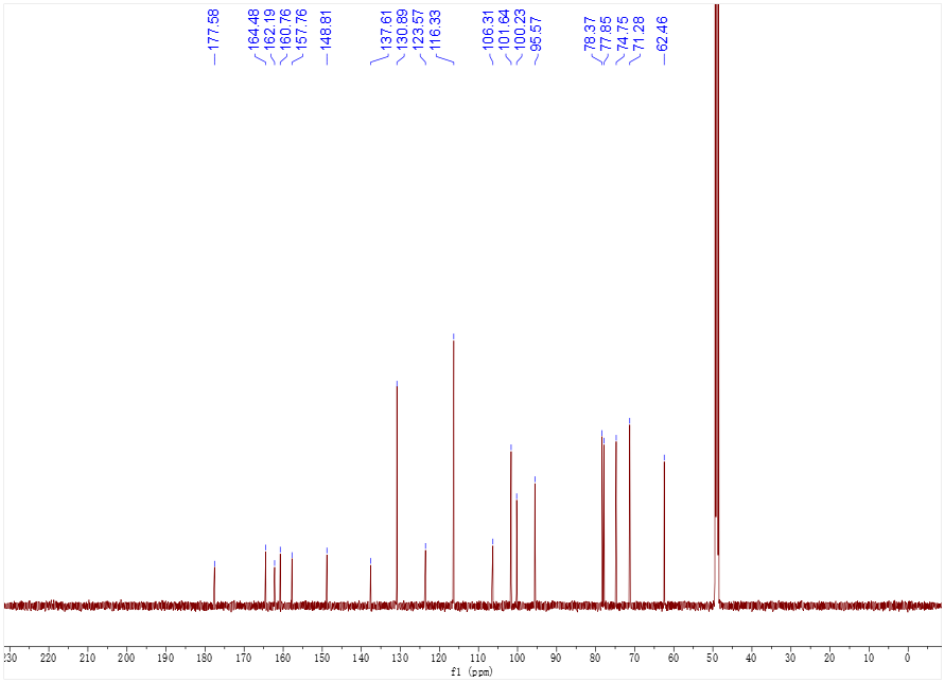

Figure S6: ^{13}C NMR (151 MHz, CD_3OD) spectrum of compound **3** (kaempferol-7-O-β-D-glucopyranoside)

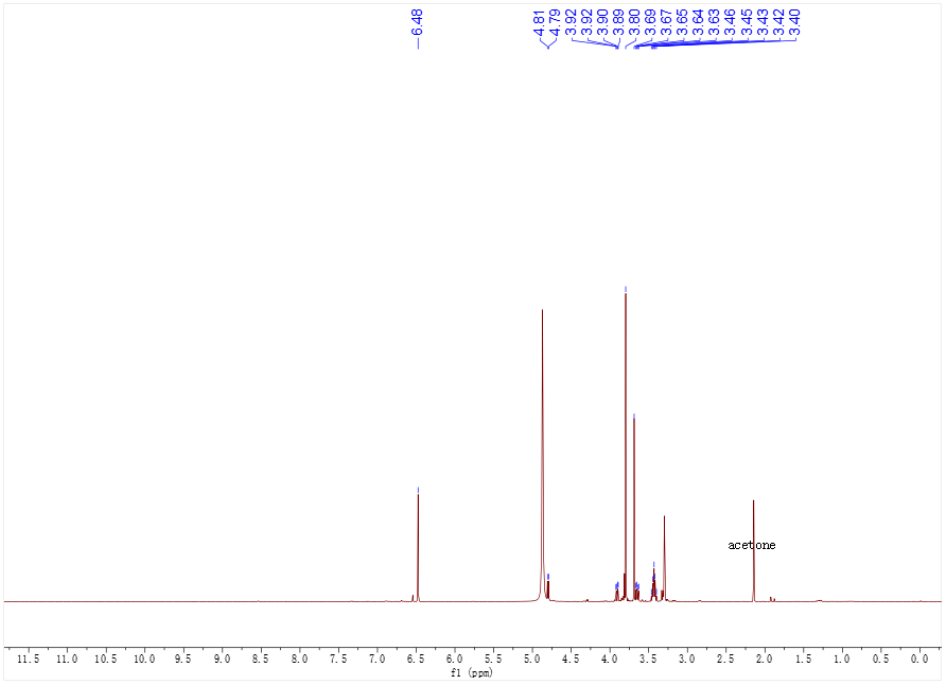

Figure S7: ^{1}H NMR (600 MHz, CH_3OD) spectrum of compound **4** (3,4,5-trimethoxyphenyl-O-β-D-glucopyranoside)

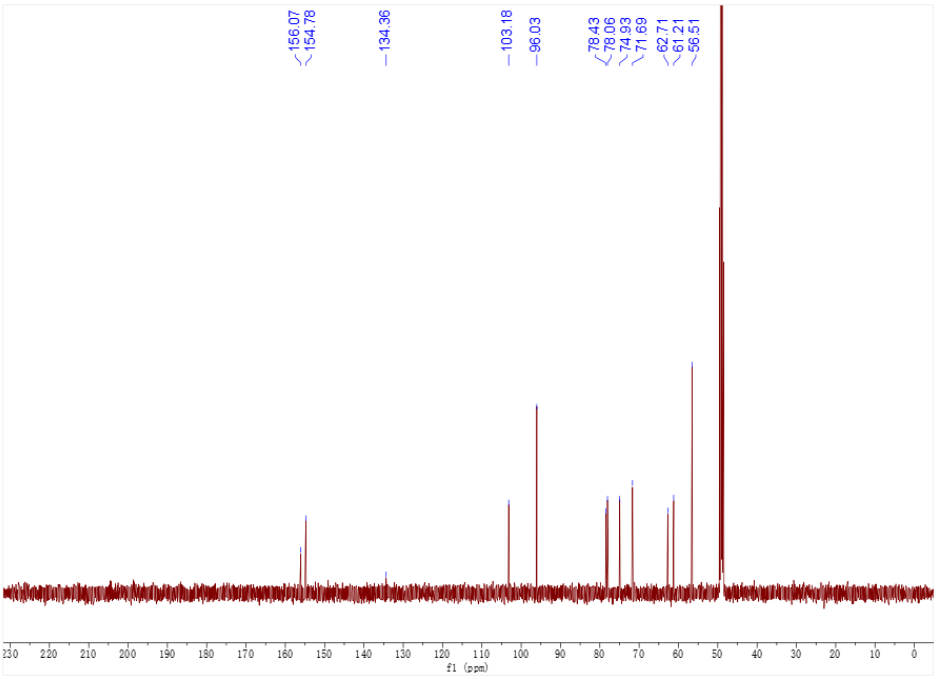

Figure S8: ^{13}C NMR (151 MHz, CH_3OD) spectrum of compound **4** (3,4,5-trimethoxyphenyl-O-β-D-glucopyranoside)

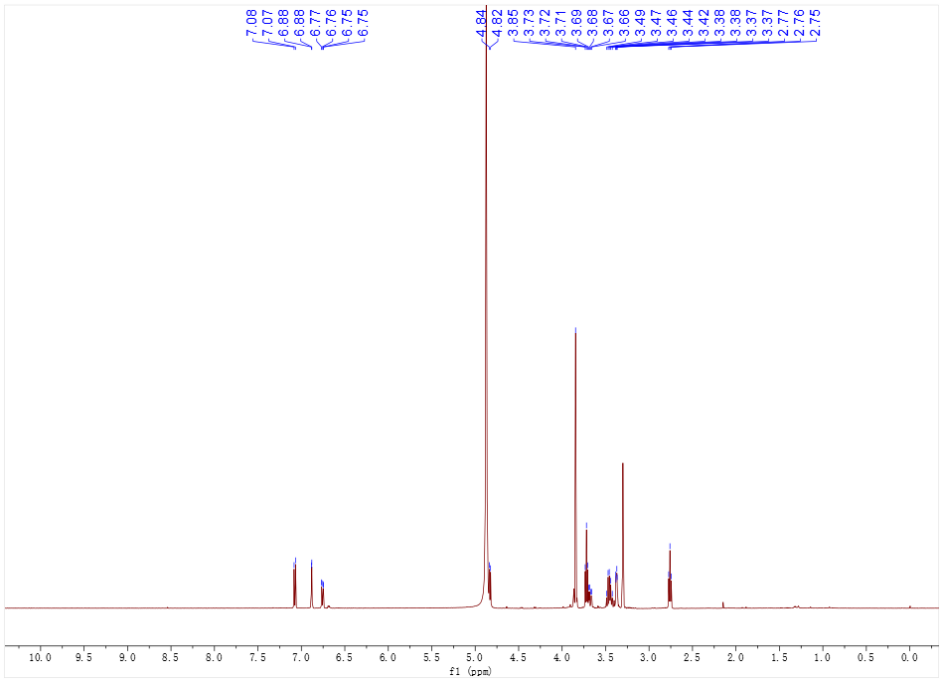

Figure S9: ^{1}H-NMR (600 MHz, CH_3OD) spectrum of compound **5** (2-methoxy-4-(2'-hydroxyethyl)-phenol-1-O-β-D-glucopyranoside)

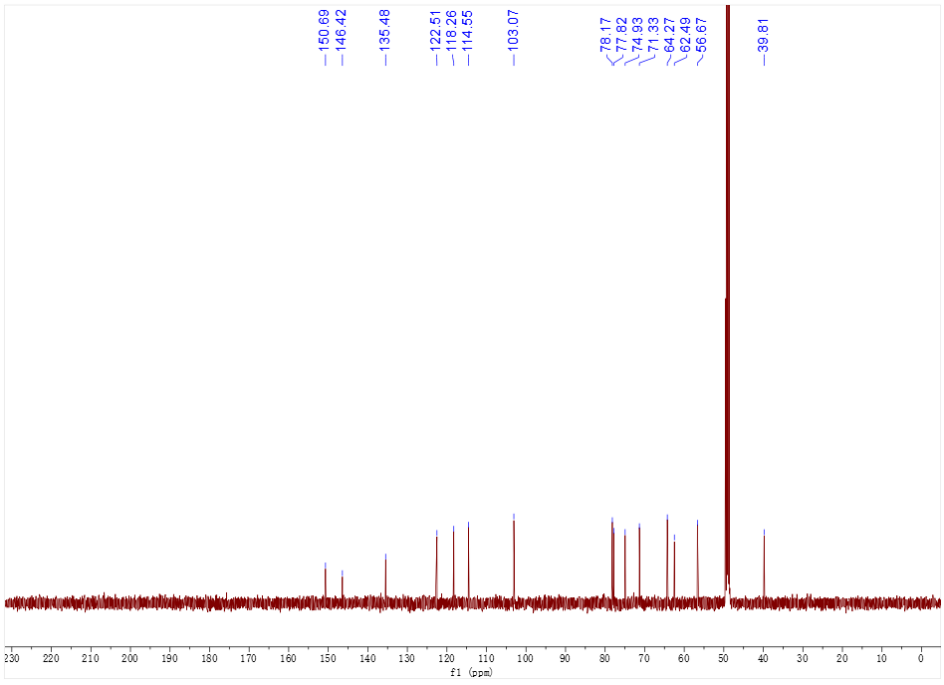

Figure S10: ^{13}C NMR (151 MHz, CH_3OD) spectrum of compound **5** (2-methoxy-4-(2'-hydroxyethyl)-phenol-1-O-β-D-glucopyranoside)

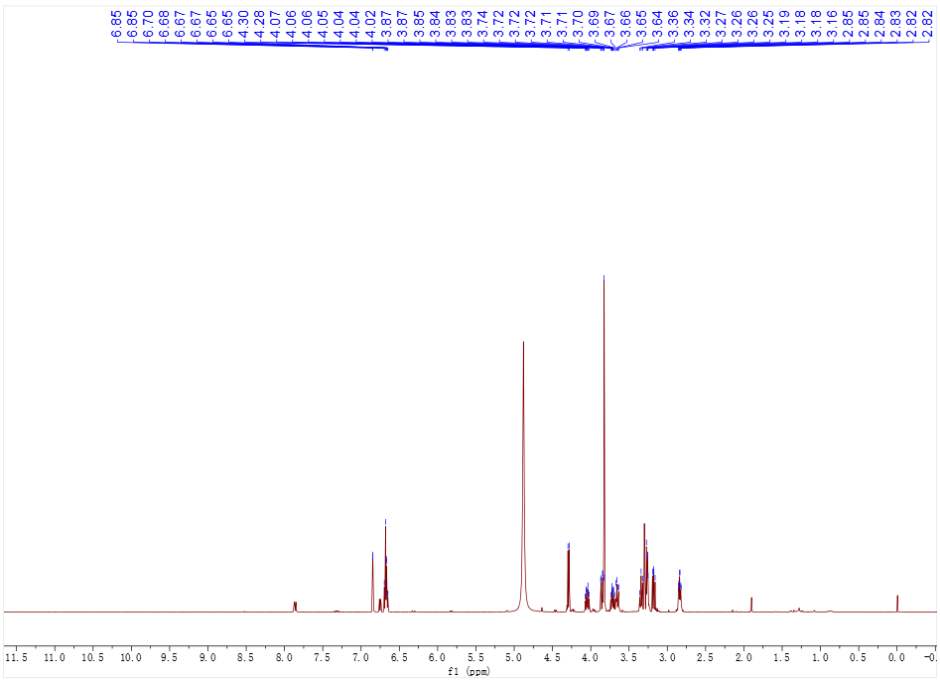

Figure S11: ^{1}H-NMR (600 MHz, CH_3OD) spectrum of compound **6 (**2-(3-hydroxy-4-methoxyphenyl) ethyl 1-O-β-D-glucopyranoside)

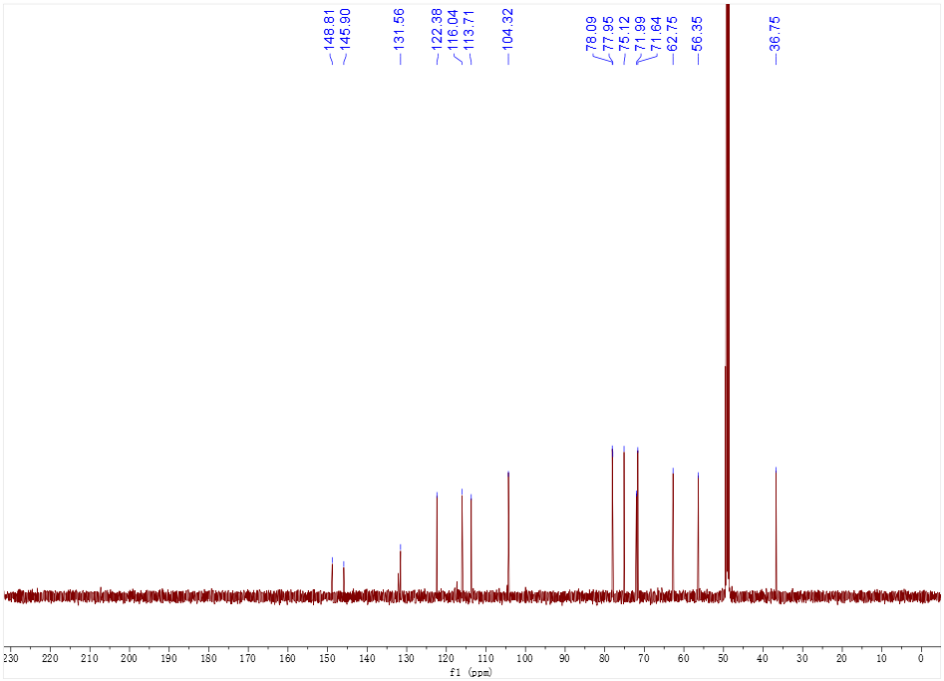

Figure S12: ^{13}C NMR (151 MHz, CH_3OD) spectrum of compound **6** (2-(3-hydroxy-4-methoxyphenyl) ethyl 1-O-β-D-glucopyranoside)

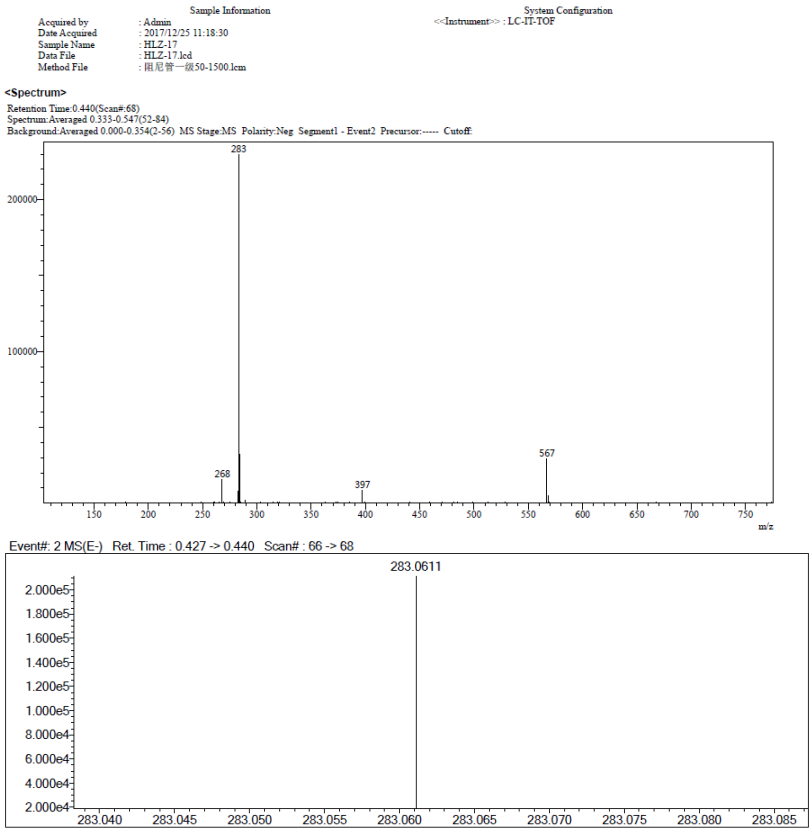

Figure S13: (-)ESI-MS spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

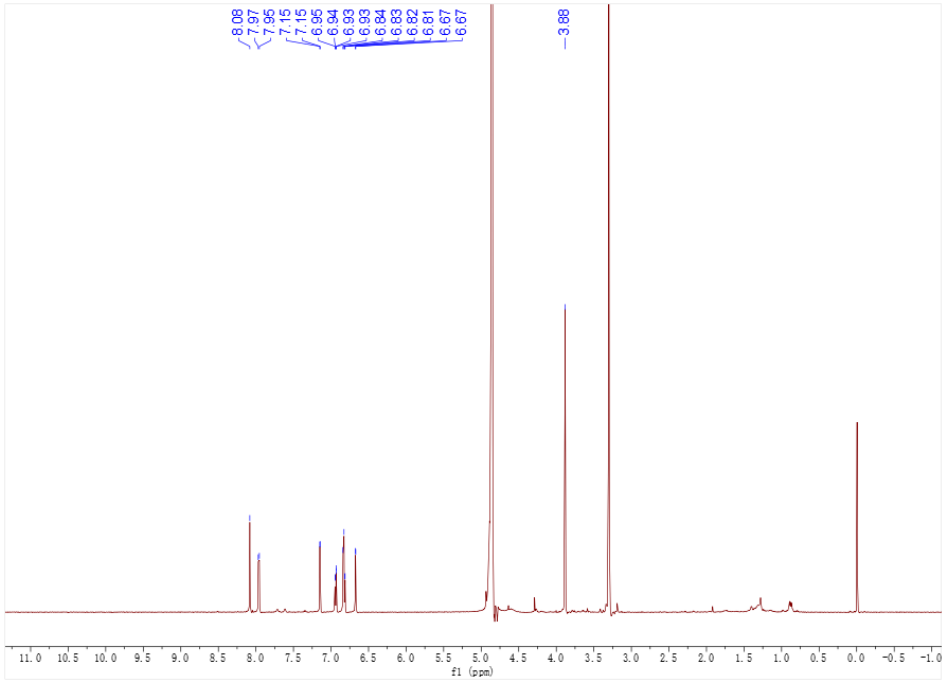

Figure S14: ^{1}H-NMR (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

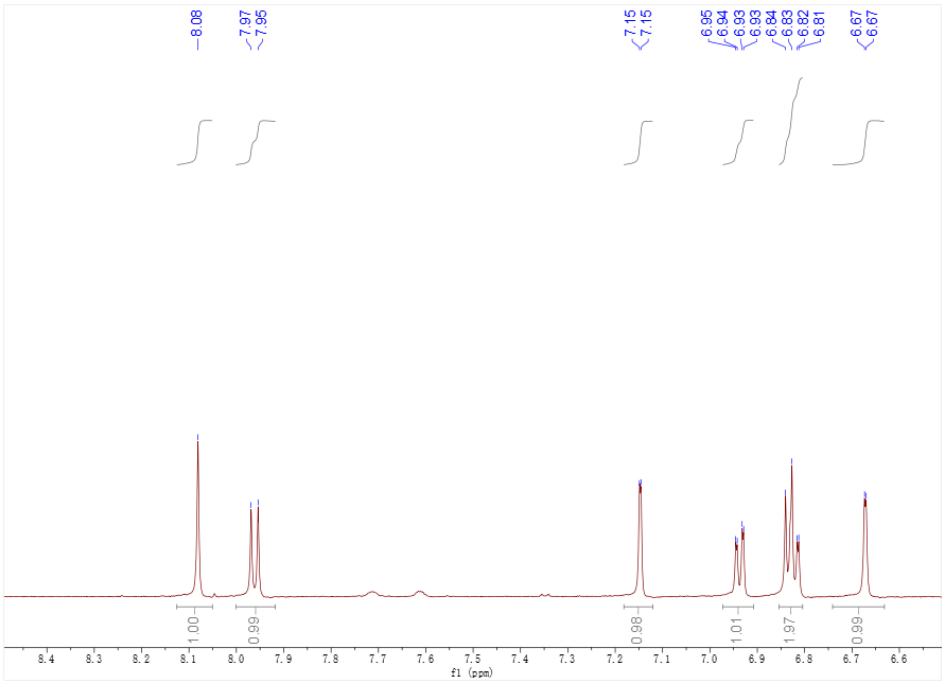

Figure S15: Expansion of the ^{1}H-NMR (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone) (From 6.50 to 8.50 ppm)

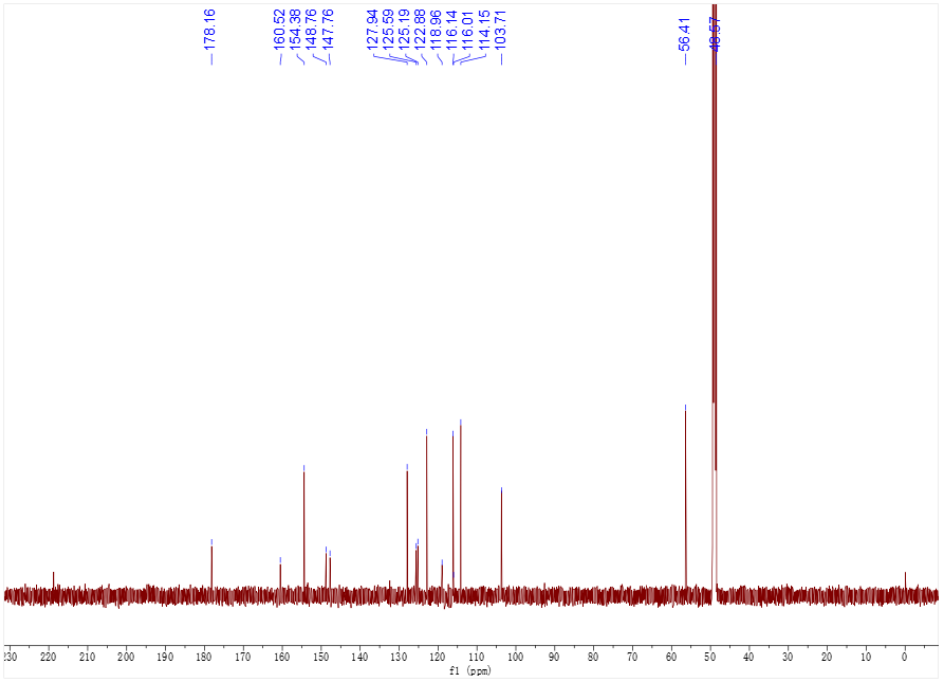

Figure S16: ^{13}C-NMR (151 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

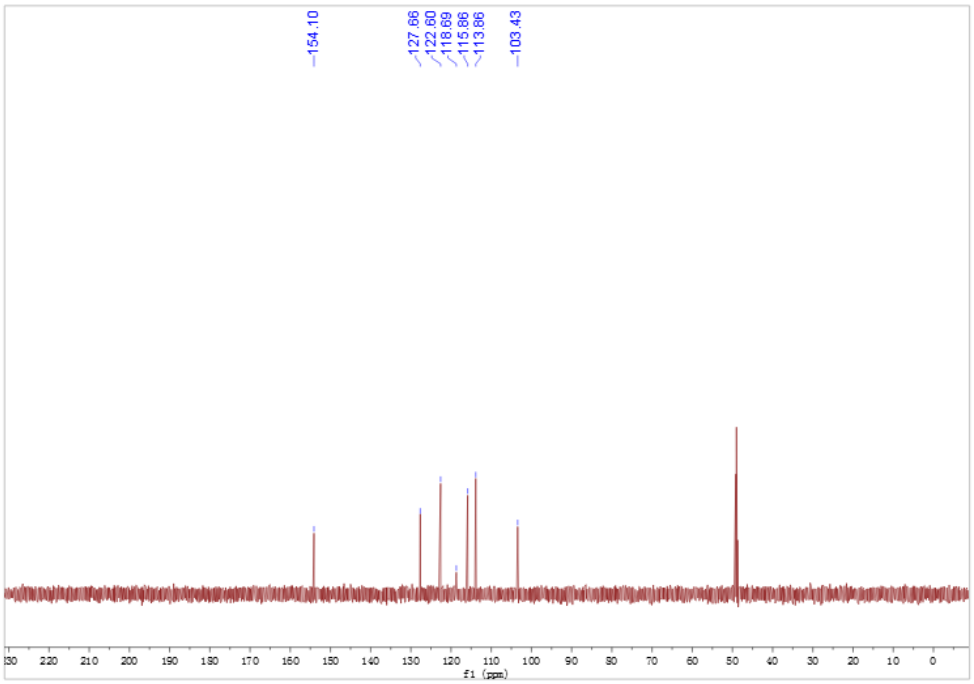

Figure S17: DEPT90 (151 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

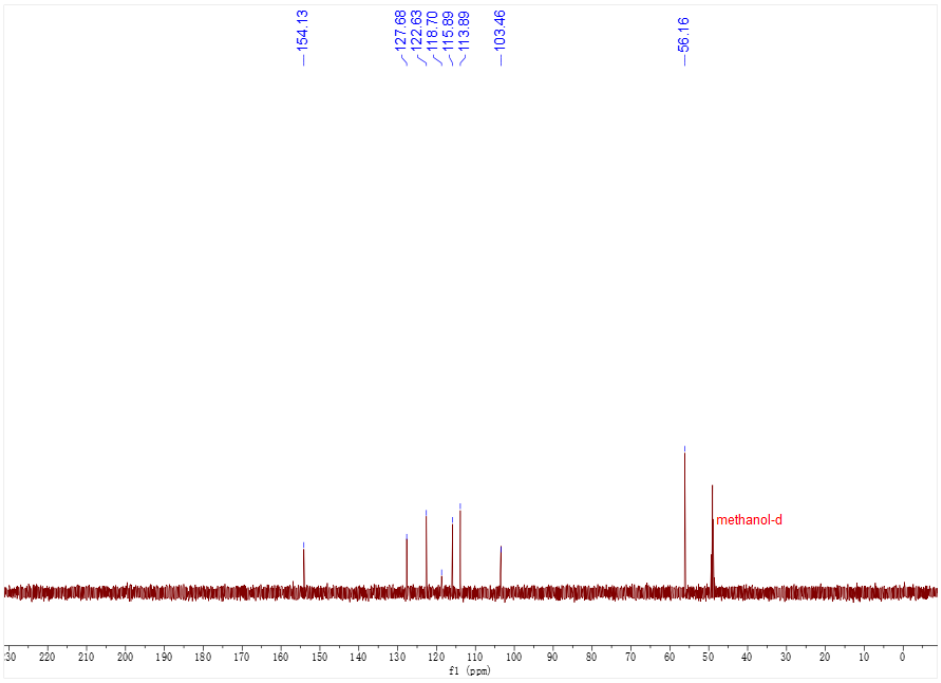

Figure S18: DEPT135 (151 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

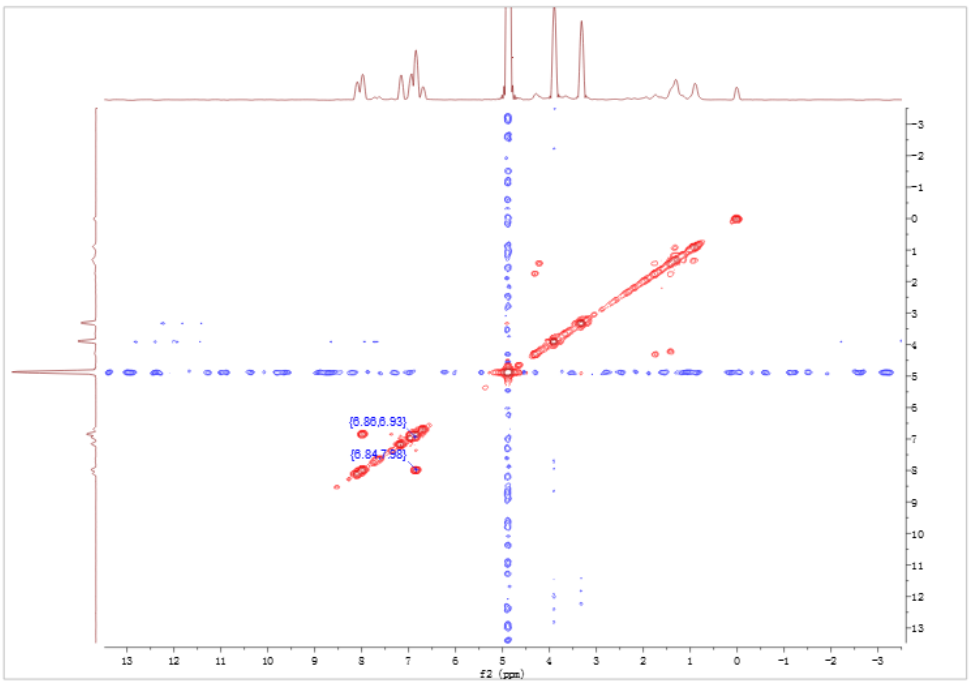

Figure S19: H-H COSY (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

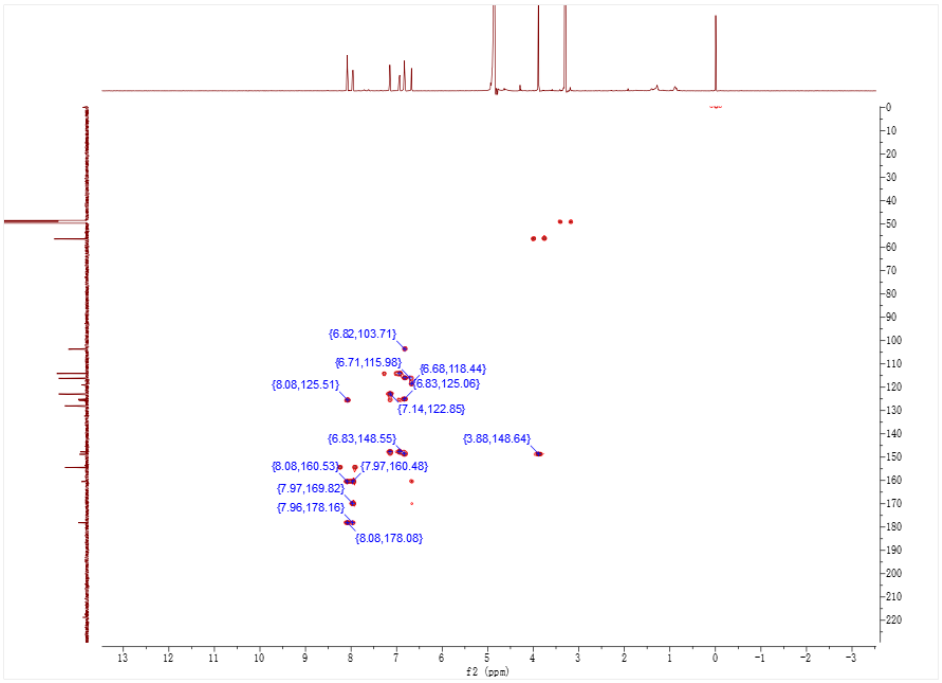

Figure S20: HMBC (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

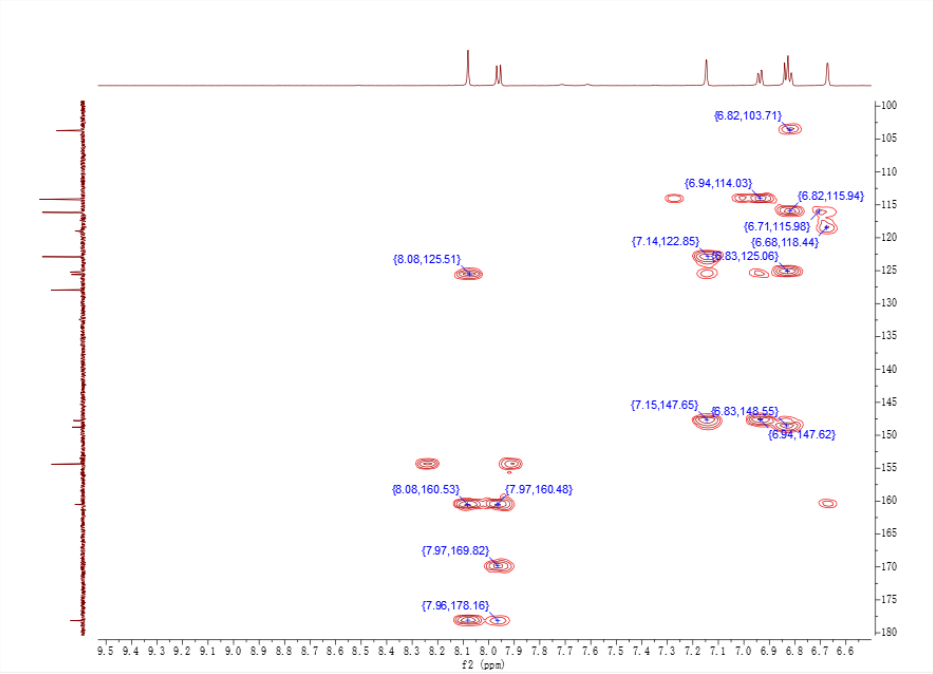

Figure S21: Expansion of the HMBC (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone) (From 6.50 to 9.50 in ^{1}H-NMR, 100.0 to 180.0 in ^{13}C-NMR)

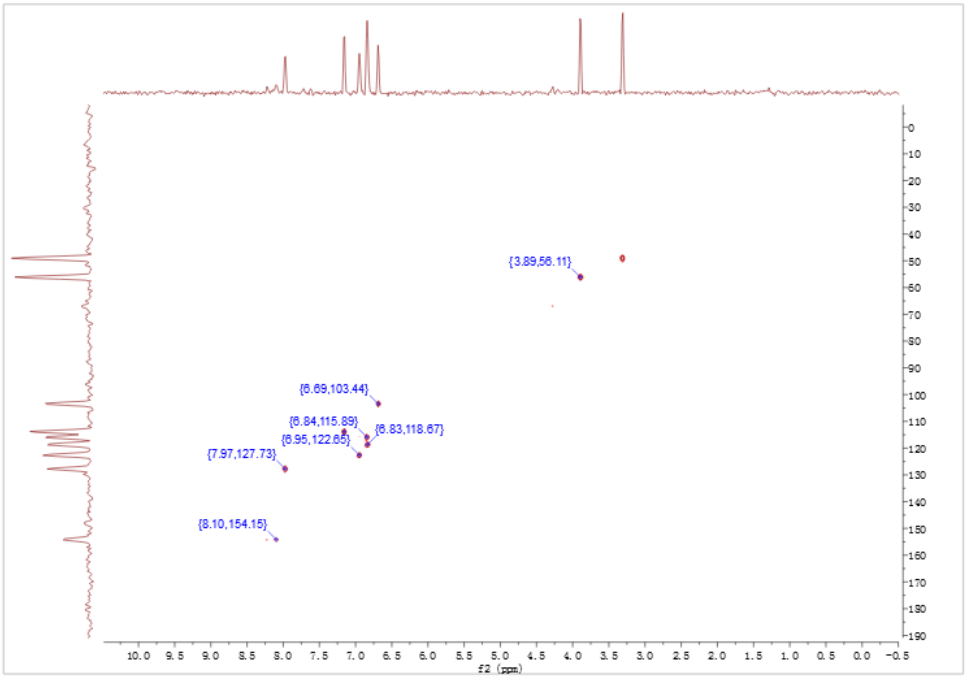

Figure S22: HSQC (600 MHz, CH_3OD) spectrum of compound **7** (7, 4'-dihydroxyl-3'-methoxyisoflavone)

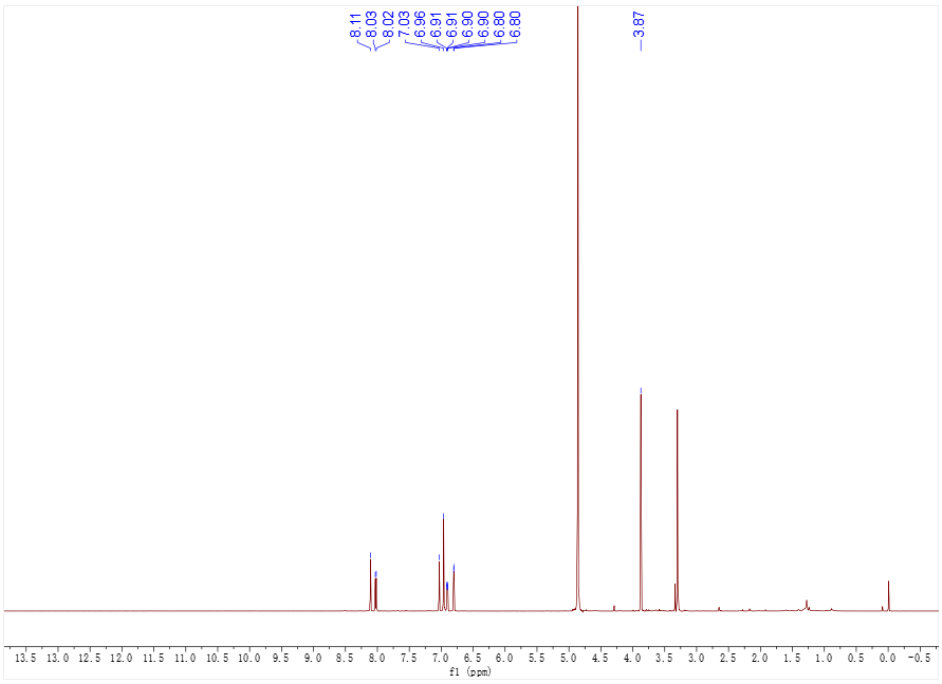

Figure S23: ^{1}H NMR (600 MHz, CH_3OD) spectrum of compound **8** (calycosin)

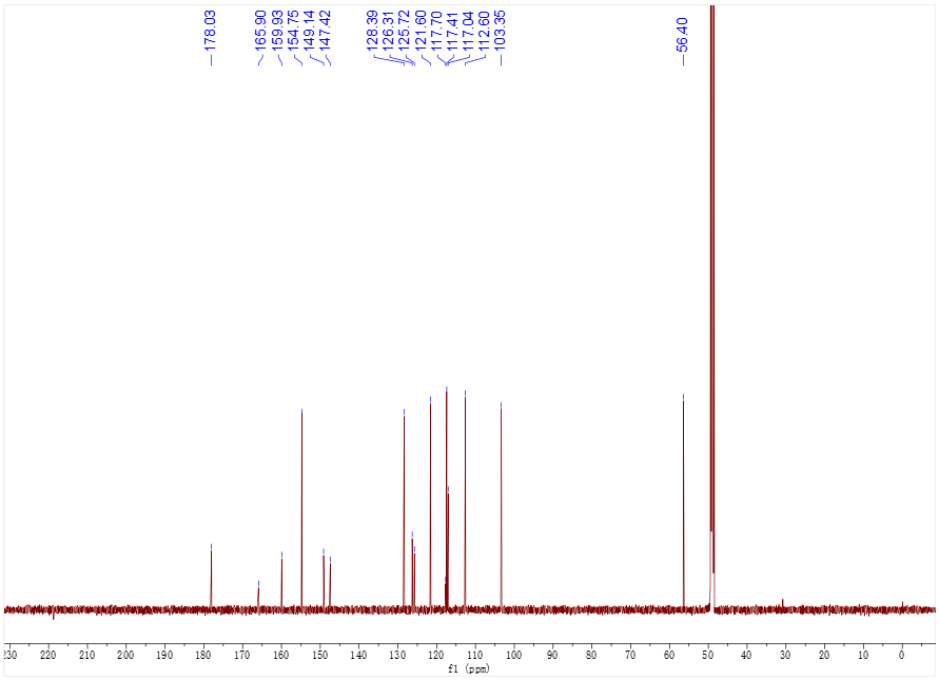

Figure S24: ^{13}C NMR (151 MHz, CH_3OD) spectrum of compound **8** (calycosin)

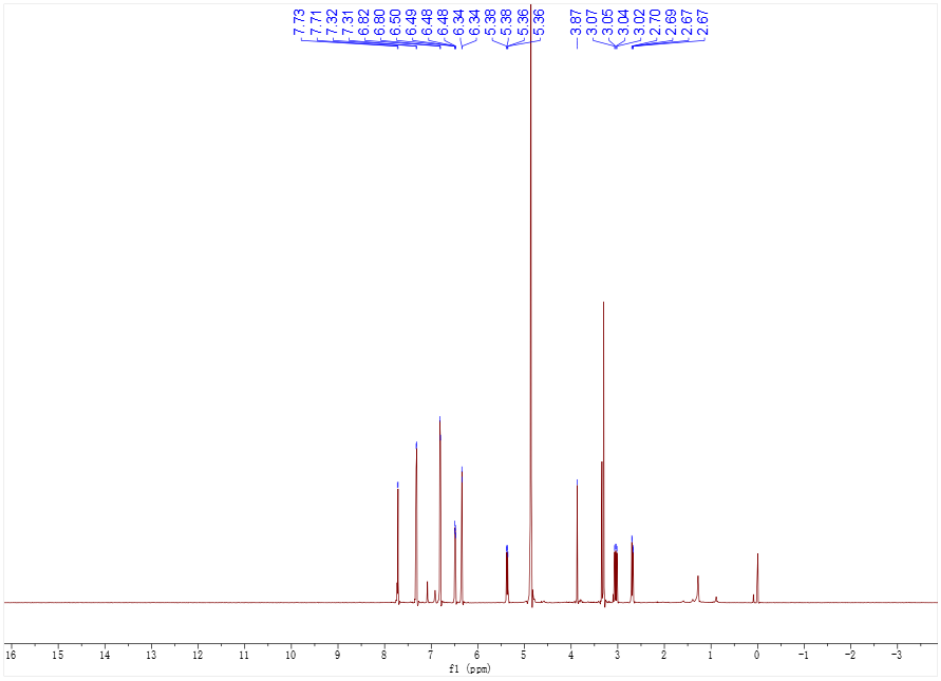

Figure S25: ^{1}H-NMR (600 MHz, CH_3OD) spectrum of compound **9** (7-hydroxyl-4'-methoxyflavanone)

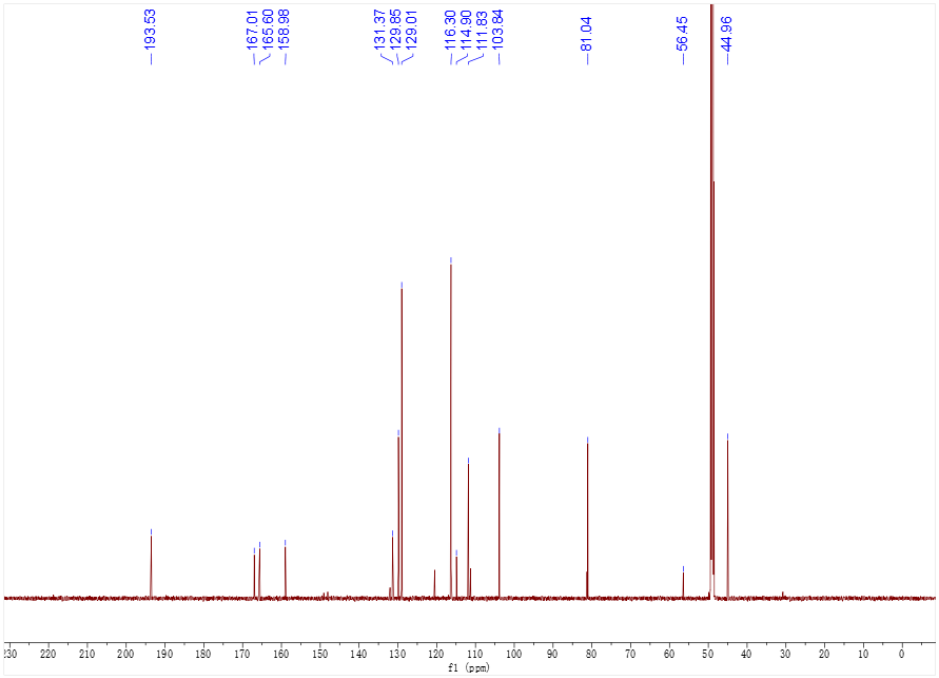

Figure S26: ^{13}C NMR (151 MHz) spectrum of compound **9** (7-hydroxyl-4'-methoxyflavanone)

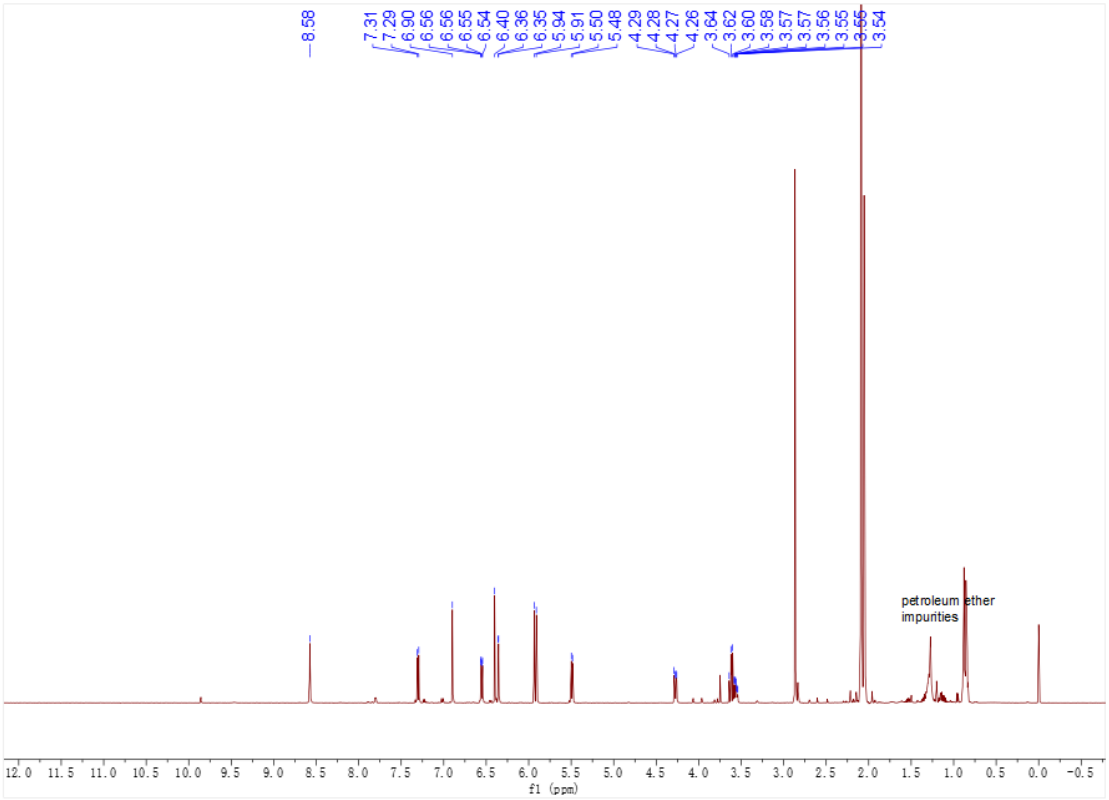

Figure S27: ^{1}H-NMR (500 MHz, CD_3COCD_3) spectrum of compound **10** (maackiain)

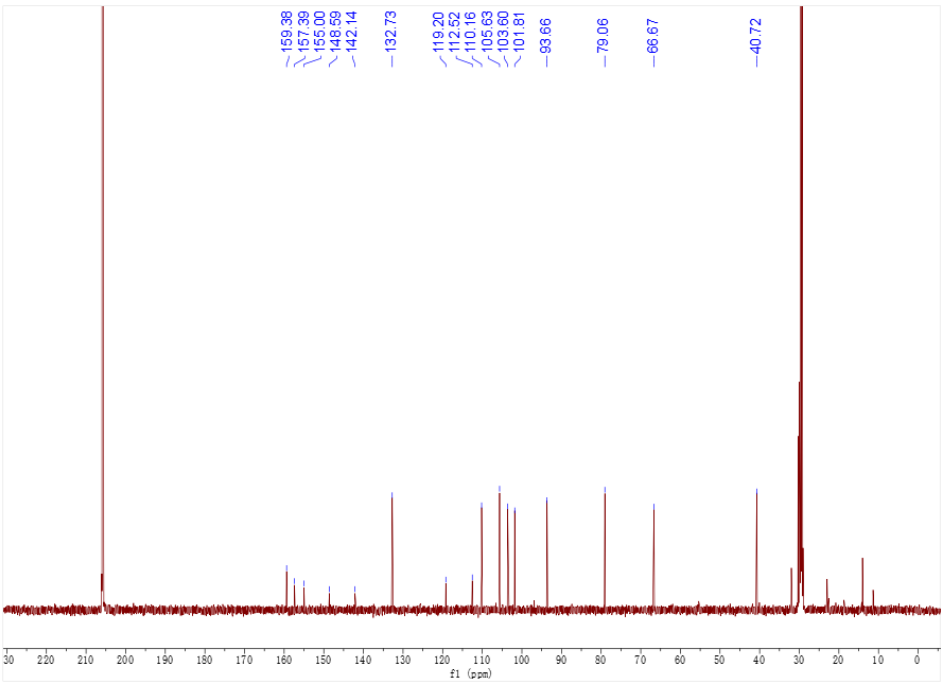

Figure S28: ^{13}C NMR (126 MHz, CD_3COCD_3) spectrum of compound **10** (maackiain)

Compound **10** was colorless needle-like crystals.

Its ESI-MS peak at *m/z* 285 $[M+H]^+$.

^{1}H NMR (500 MHz, CD_3COCD_3) δ: 8.58 (s, 1H, 3-OH), 7.30 (d, J = 8.5 Hz, 1H, H-1), 6.90 (s, 1H, H-7), 6.55 (dd, J = 8.5, 2.4 Hz, 1H, H-2), 6.40 (s, 1H, H-11), 6.36 (d, J = 2.4 Hz, 1H, H-4), 5.92 (d, J = 12.6 Hz, 2H, H-9), 5.49 (d, J = 6.9 Hz, 1H, H-12a), 4.27 (m, 1H, H-6), 3.62 (m, 1H, H-6a), 3.56 (m, 1H, H-6).

^{13}C NMR (126 MHz, CD_3COCD_3) δ: 159.38 (C-3), 157.39 (C-4a), 155.00 (C-11a), 148.59 (C-10a), 142.14 (C-7a), 132.73 (C-1), 119.20 (C-6b), 112.52 (C-12b), 110.16 (C-2), 105.63 (C-7), 103.60 (C-4), 101.81 (C-9), 93.66 (C-11), 79.06 (C-12a), 66.67 (C-6), 40.72 (C-6a).

The above NMR data are consistent with the reference[15], this compound was eventually identified as maackiain (RN 2035-15-6).

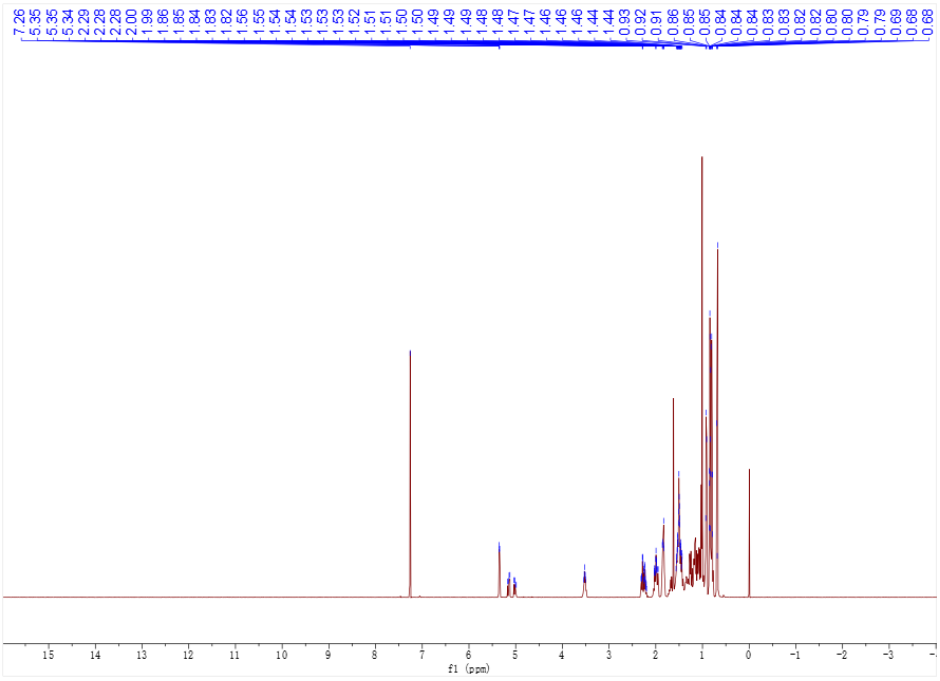

Figure S29: ^{1}H-NMR (500 MHz, $CDCl_3$) spectrum of compound **11** (stigmasterol)

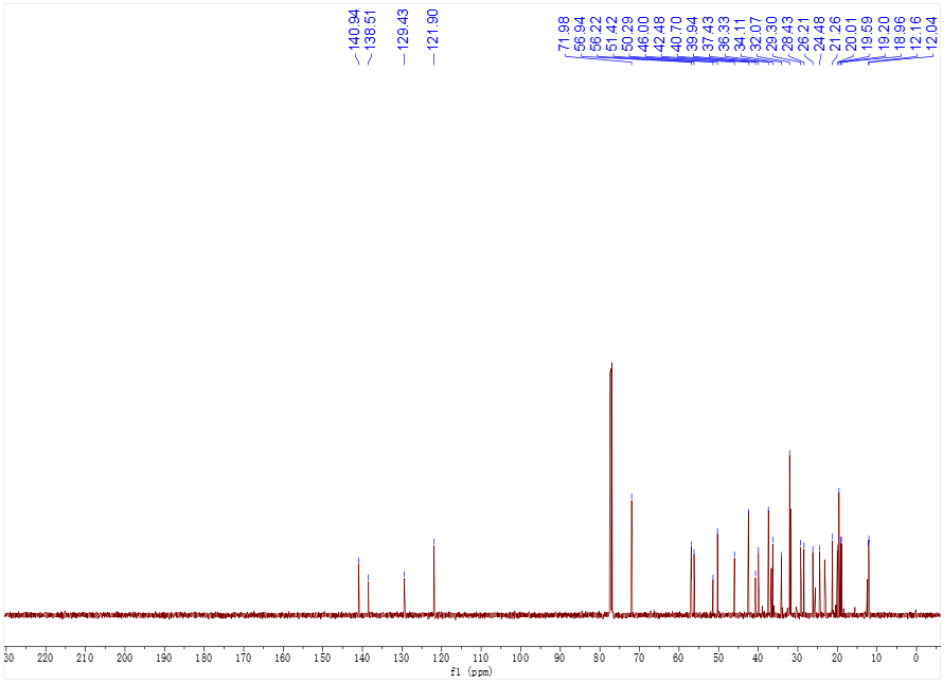

Figure S30: ^{13}C NMR (126 MHz, $CDCl_3$) spectrum of compound **11** (stigmasterol)

Compound **11** was colorless needle-like crystals.

^{1}H NMR (500 MHz, $CDCl_3$) δ: 5.35 (m, 2H, H-22, 23), 5.08 (m, 1H, H-6), 3.52 (m, 1H, H-3), 2.26 (m, 4H, H-4, 7), 1.84 (m, 4H, H-15, 16, 20, 24), 1.49 (m, 17H, H-1, 1, 2, 2, 8, 9, 11, 11, 12, 12, 14, 15, 16, 17, 25, 28, 28), 0.82 (m, 12H, 19, 26, 27, 29-CH_3), 0.69 (m, 6H, 18, 21-CH_3).

^{13}C NMR (126 MHz, $CDCl_3$) δ: 140.94 (C-5), 138.51 (C-22), 129.43 (C-23), 121.90 (C-6), 71.98 (C-3), 56.94 (C-14), 56.22 (C-17), 51.42 (C-24), 50.29 (C-9), 46.00 (C-13), 42.48 (C-4), 40.70 (C-20), 39.94 (C-12), 37.43 (C-1), 36.32 (C-10), 34.11 (C-7), 32.09 (C-2), 32.07 (C-8), 29.30 (C-25), 28.43 (C-16), 26.21 (C-15), 24.48 (C-28), 21.26 (C-11), 20.01 (C-26), 19.59 (C-27), 19.20 (C-21), 18.96 (C-19), 12.16 (C-29), 12.04 (C-18).

The above NMR data are consistent with the reference[16], this compound was eventually identified as stigmasterol (RN 83-48-7).

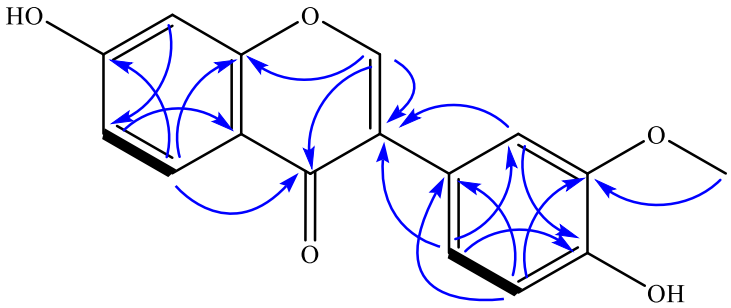

Figure S31: Key ^{1}H-^{1}H COSY and HMBC correlations of compound **7**