

# Acylated flavone *O*-glucuronides from the aerial parts of *Nepeta curviflora*

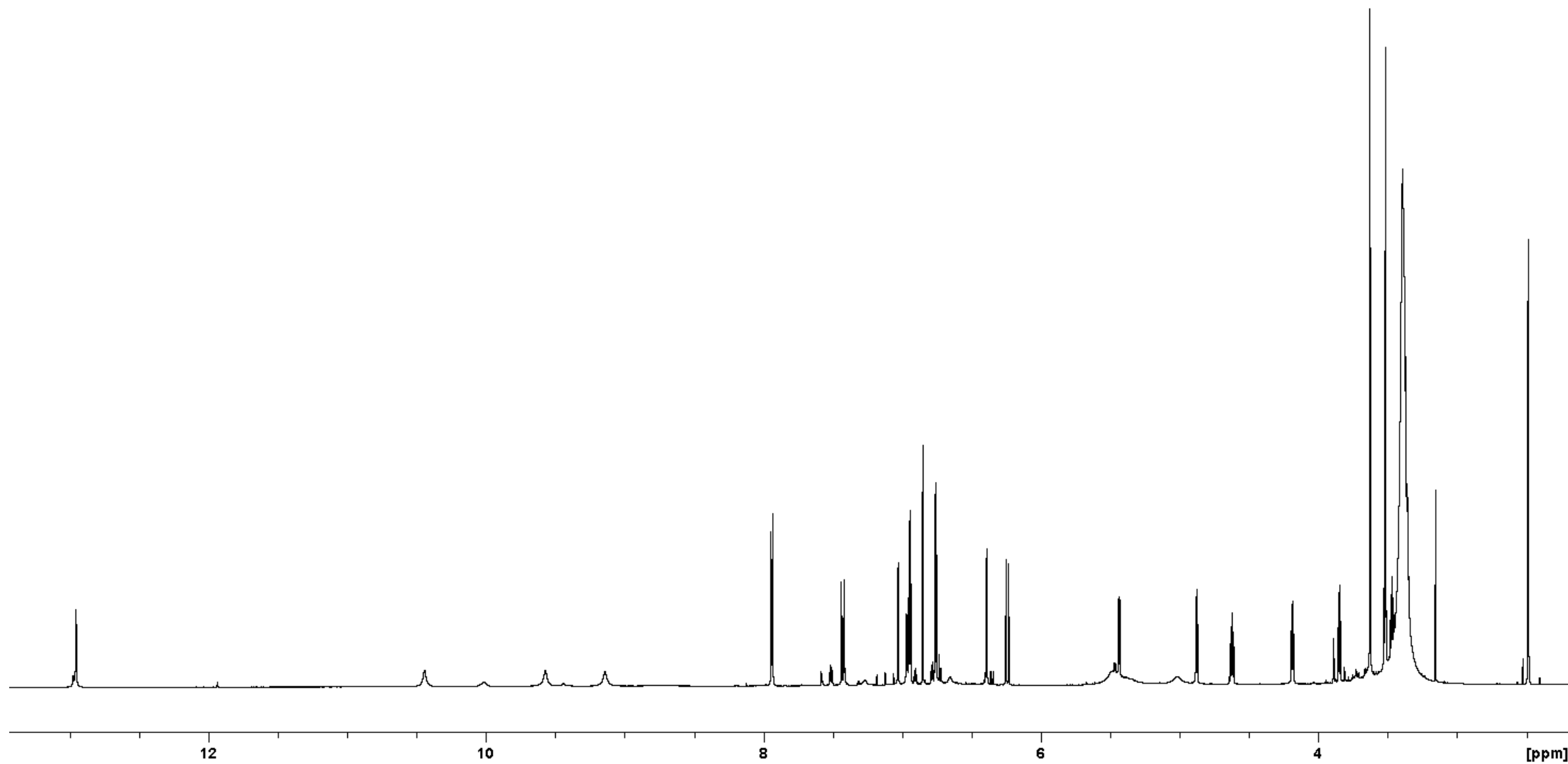
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and Saleh Rayyan

Supplementary data  
NMR spectra

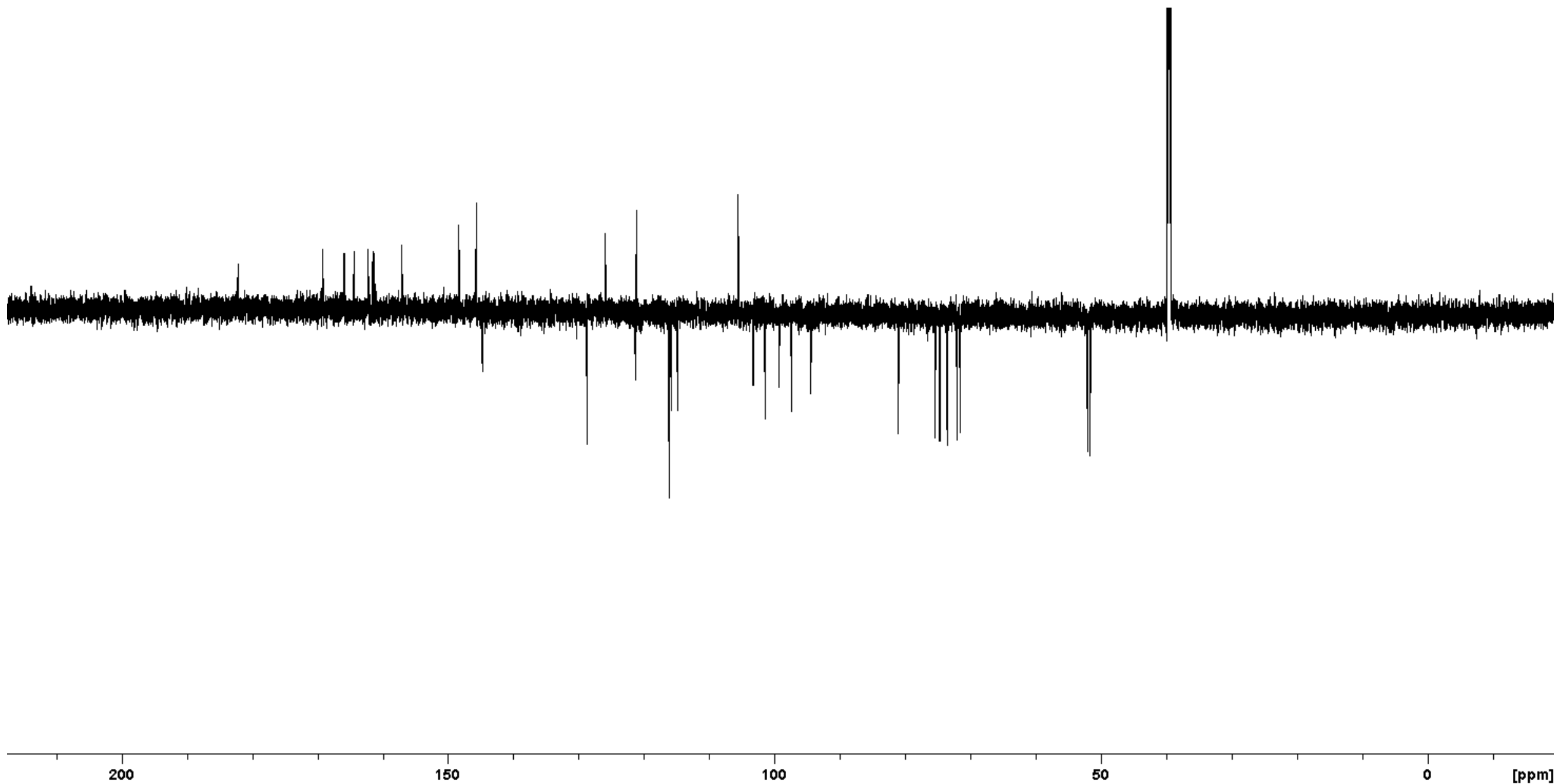
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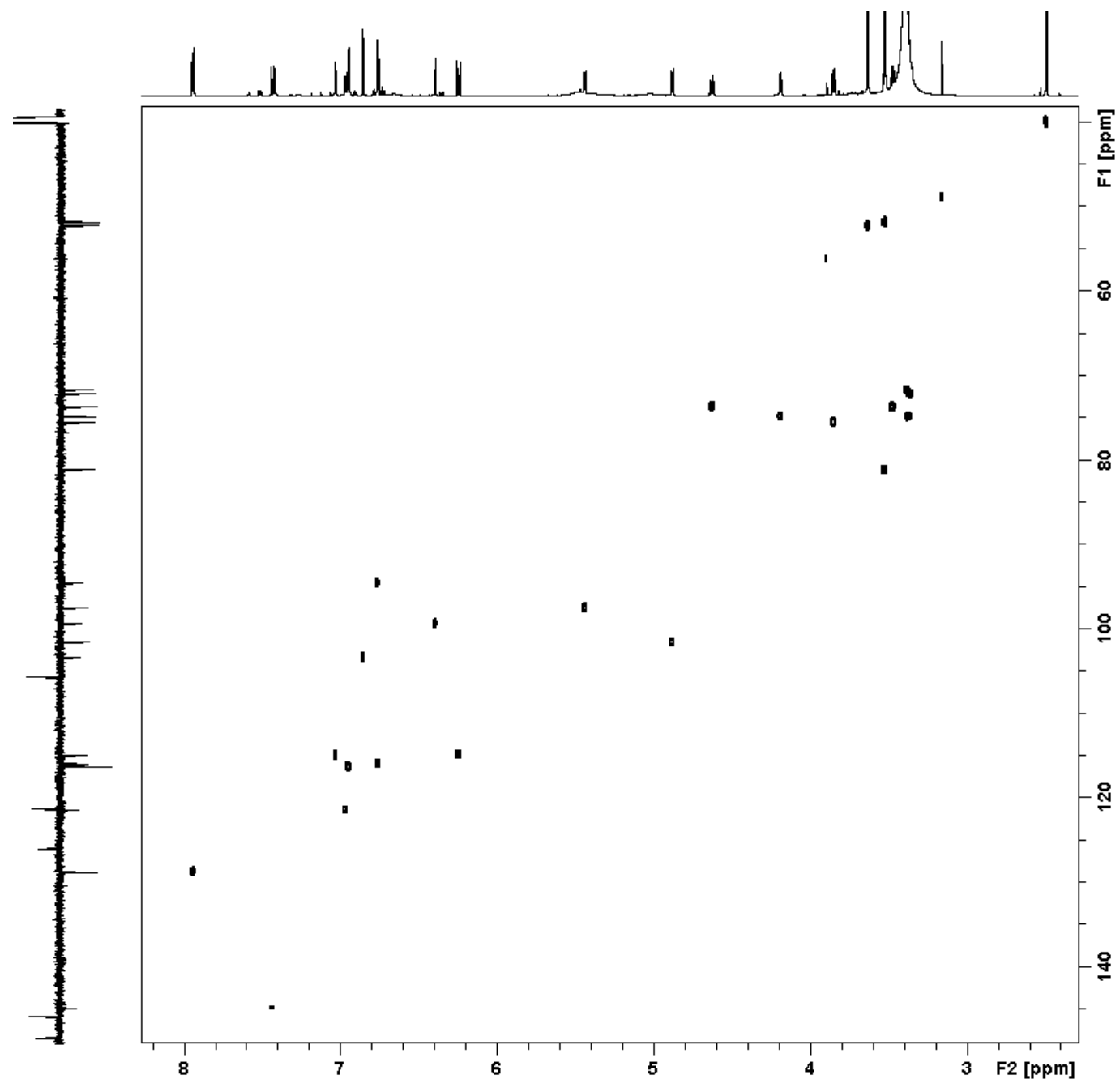
**Figure S1.** 1D  $^1\text{H}$  NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



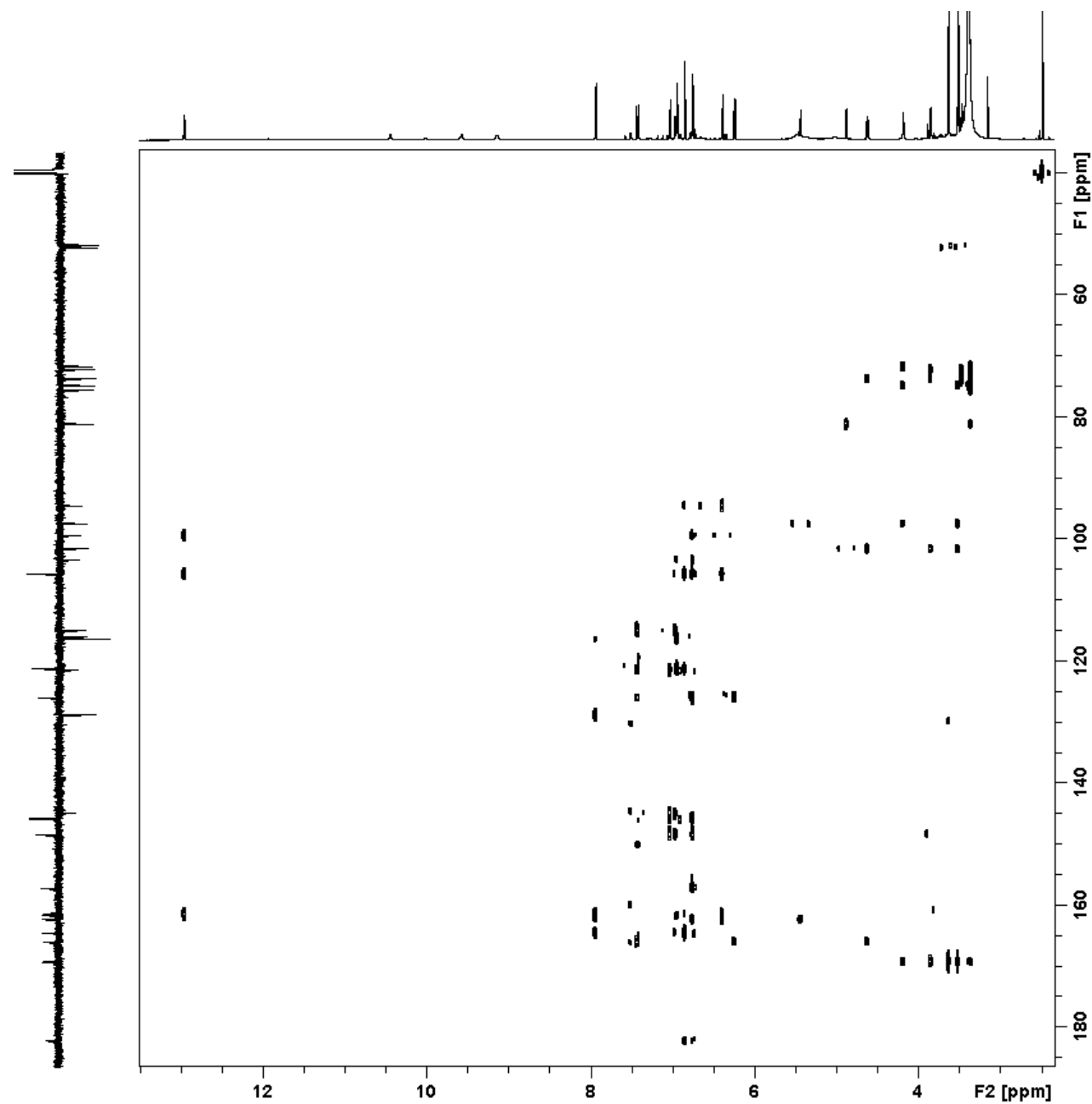
**Figure S2.** 1D  $^{13}\text{C}$  CAPT NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



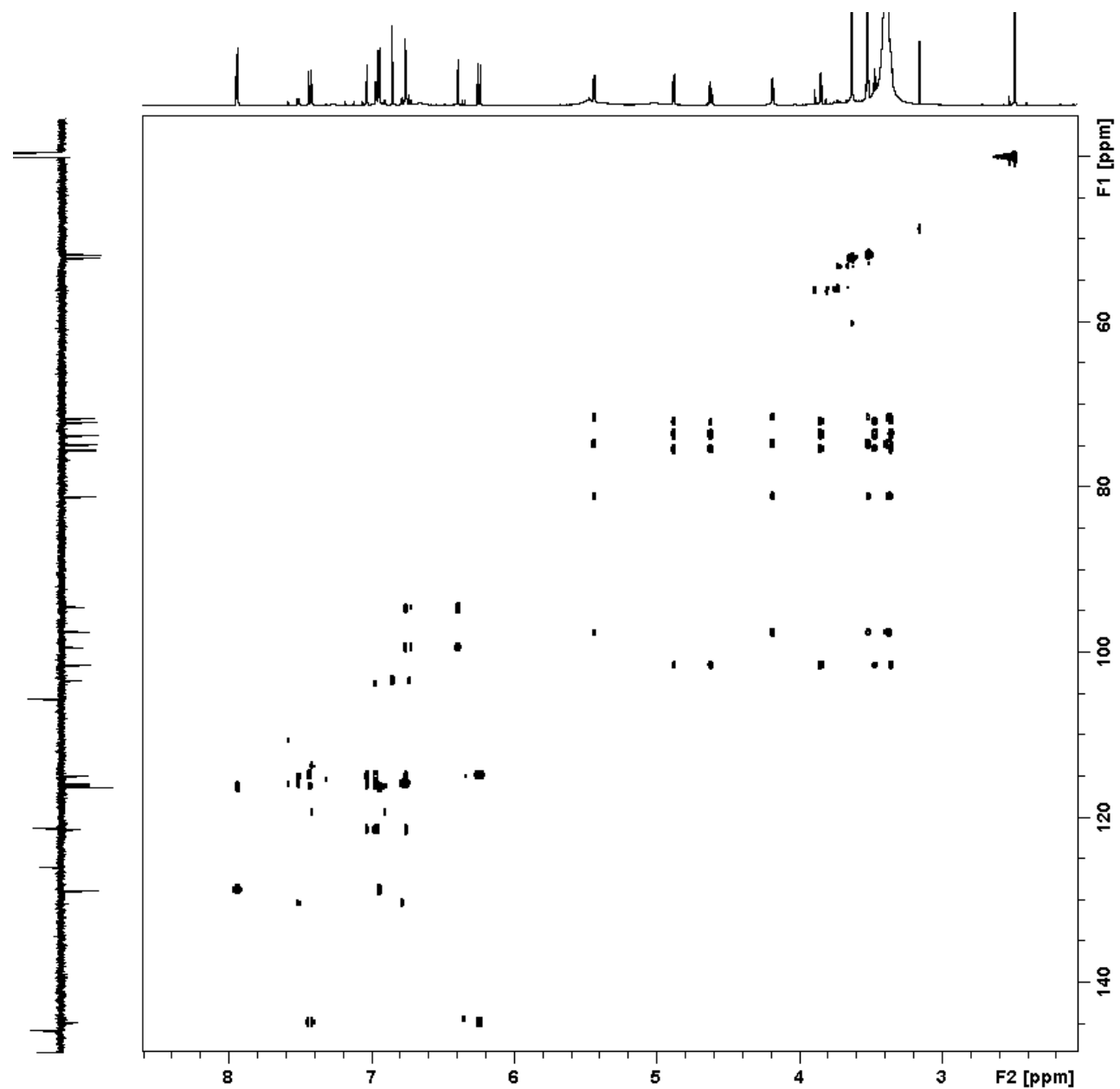
**Figure S3.** 2D  $^1\text{H}$ - $^{13}\text{C}$  edited HSQC NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



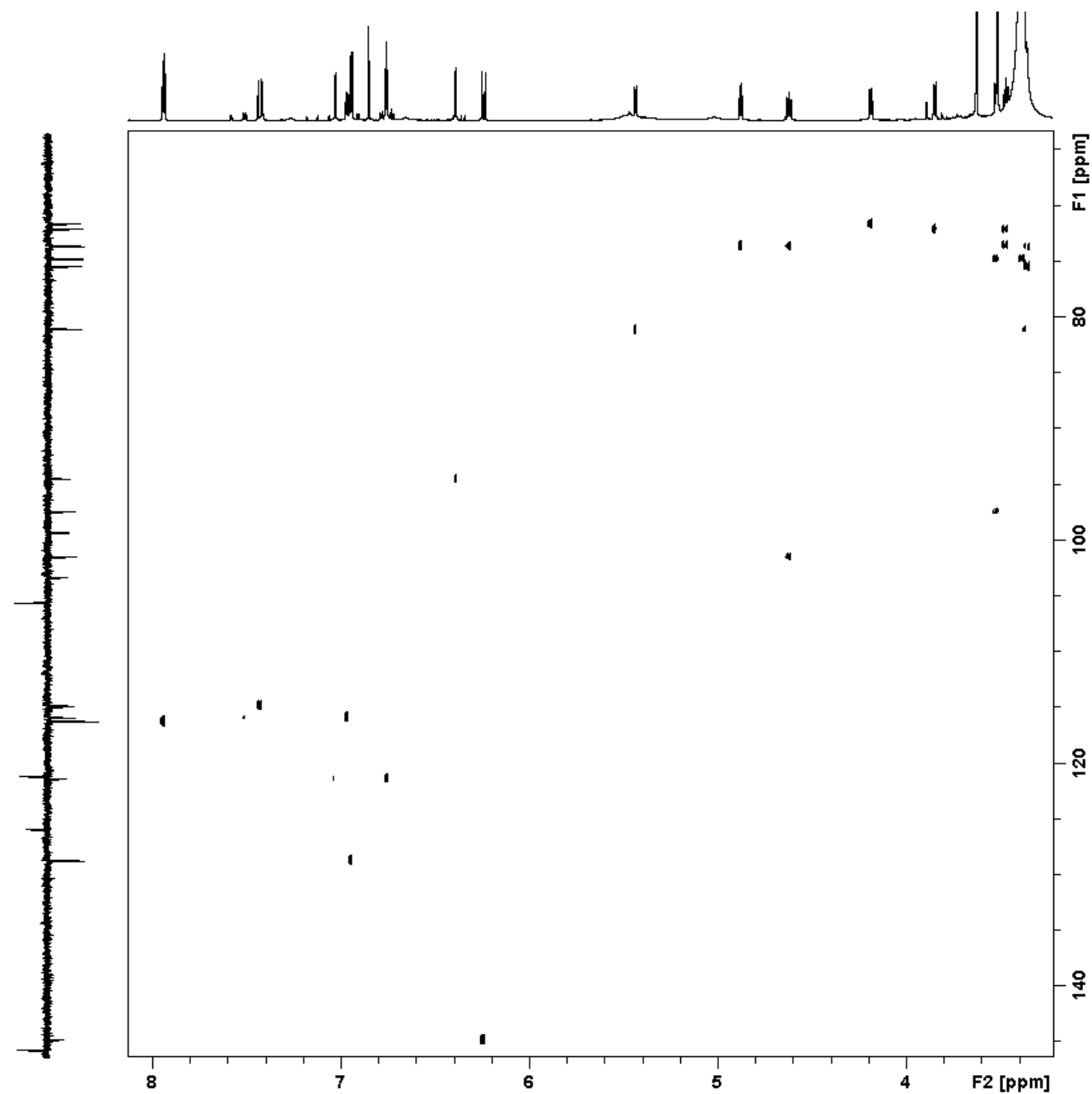
**Figure S4.** 2D  $^1\text{H}$ - $^{13}\text{C}$  HMBC NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



**Figure S5.** 2D  $^1\text{H}$ - $^{13}\text{C}$  HSQC-TOCSY NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)

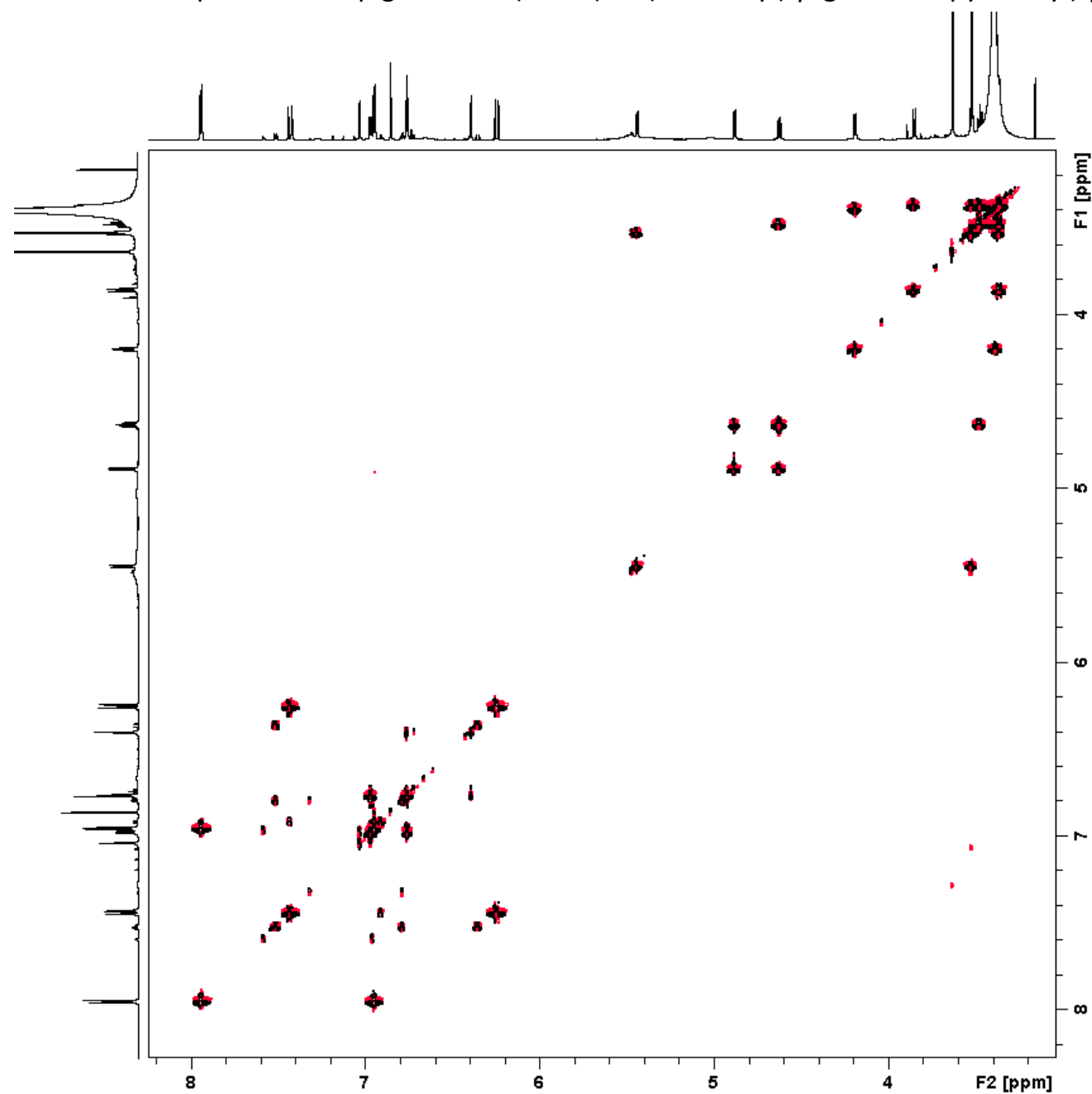


**Figure S6.** 2D  $^1\text{H}$ - $^{13}\text{C}$  H2BC NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)

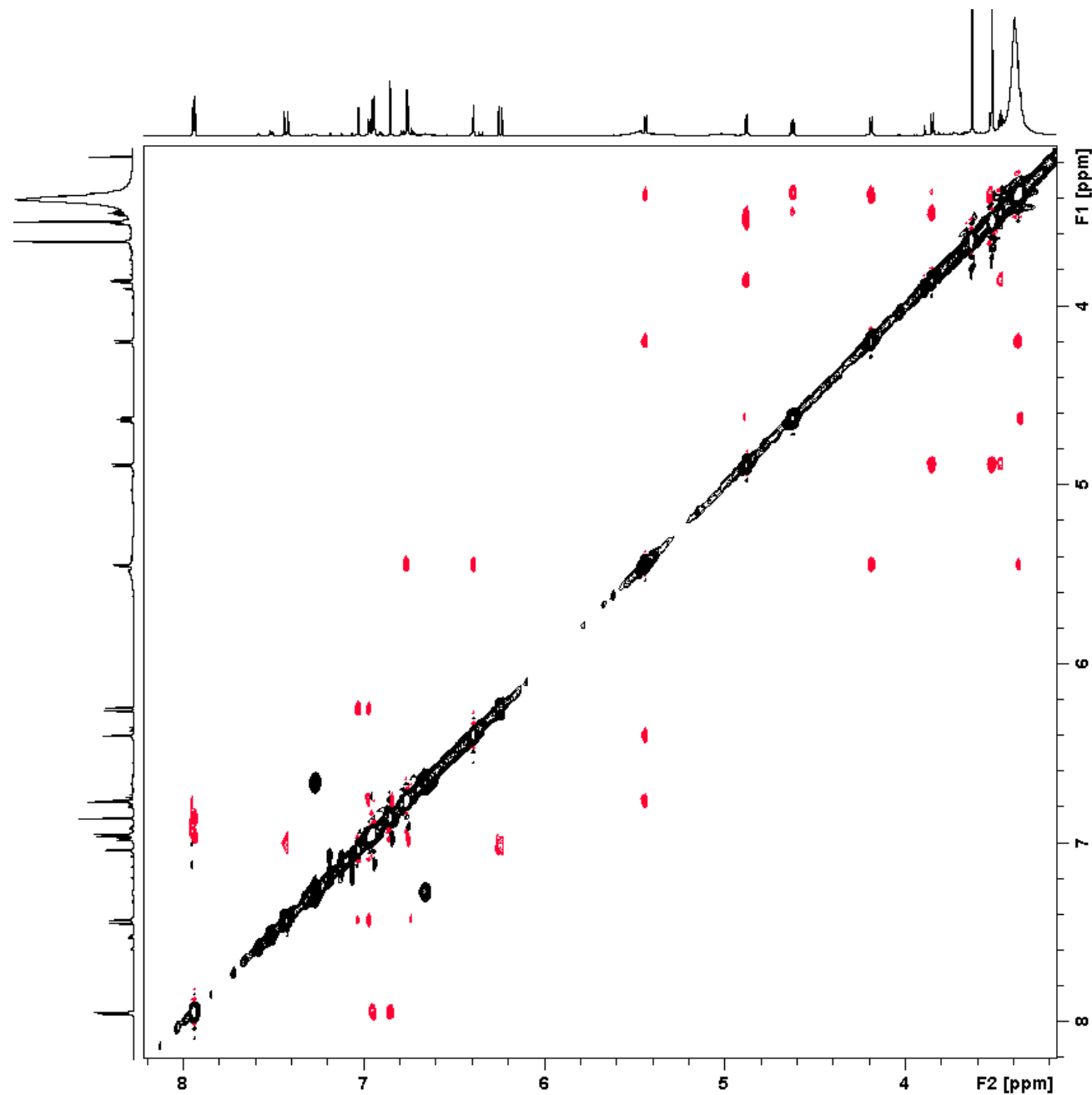




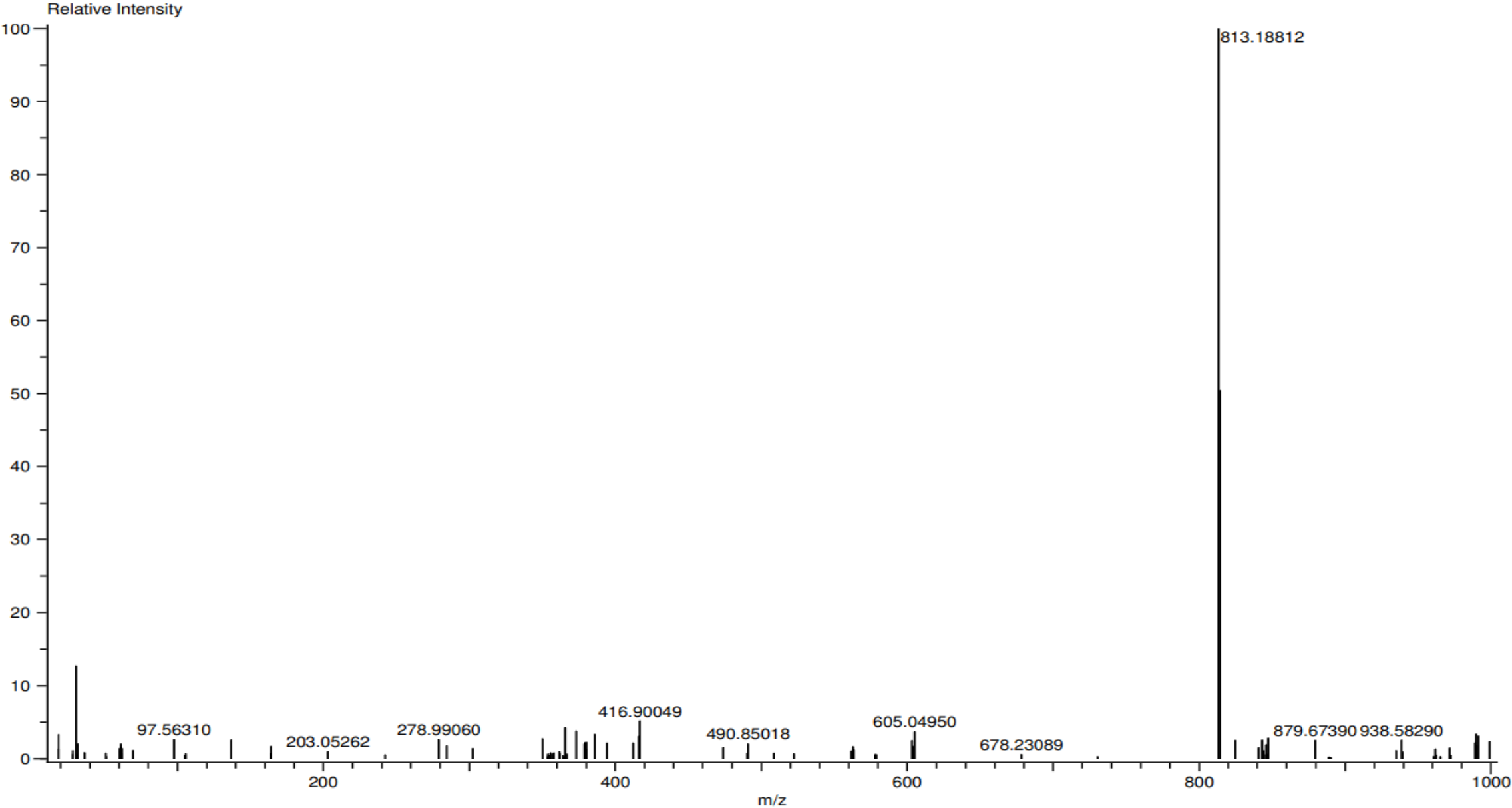
**Figure S7.** 2D  $^1\text{H}$ - $^1\text{H}$  COSY NMR spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



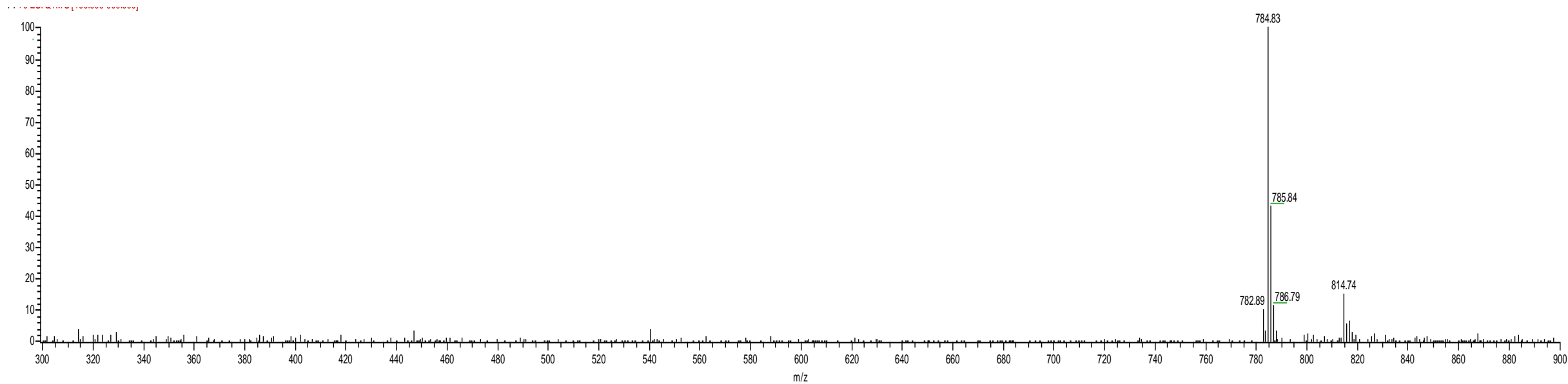
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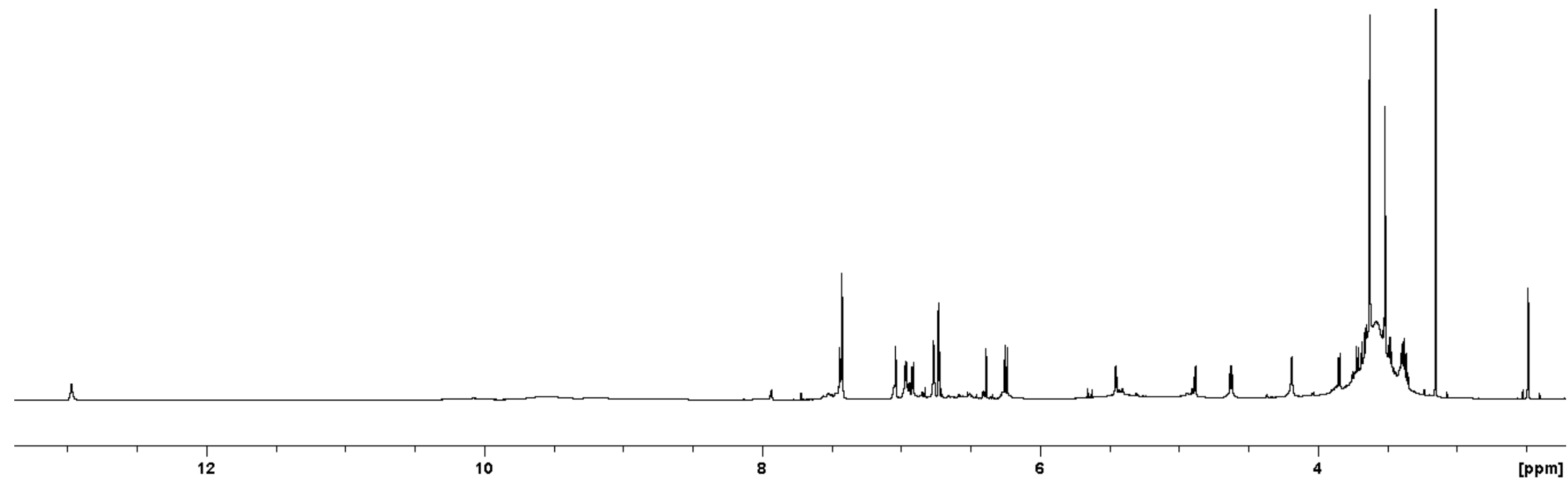
**Figure S9.** HR Mass spectrum of the dimethylester form of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)-β-glucuronopyranosyl)-β-glucuronopyranoside) (**1**)



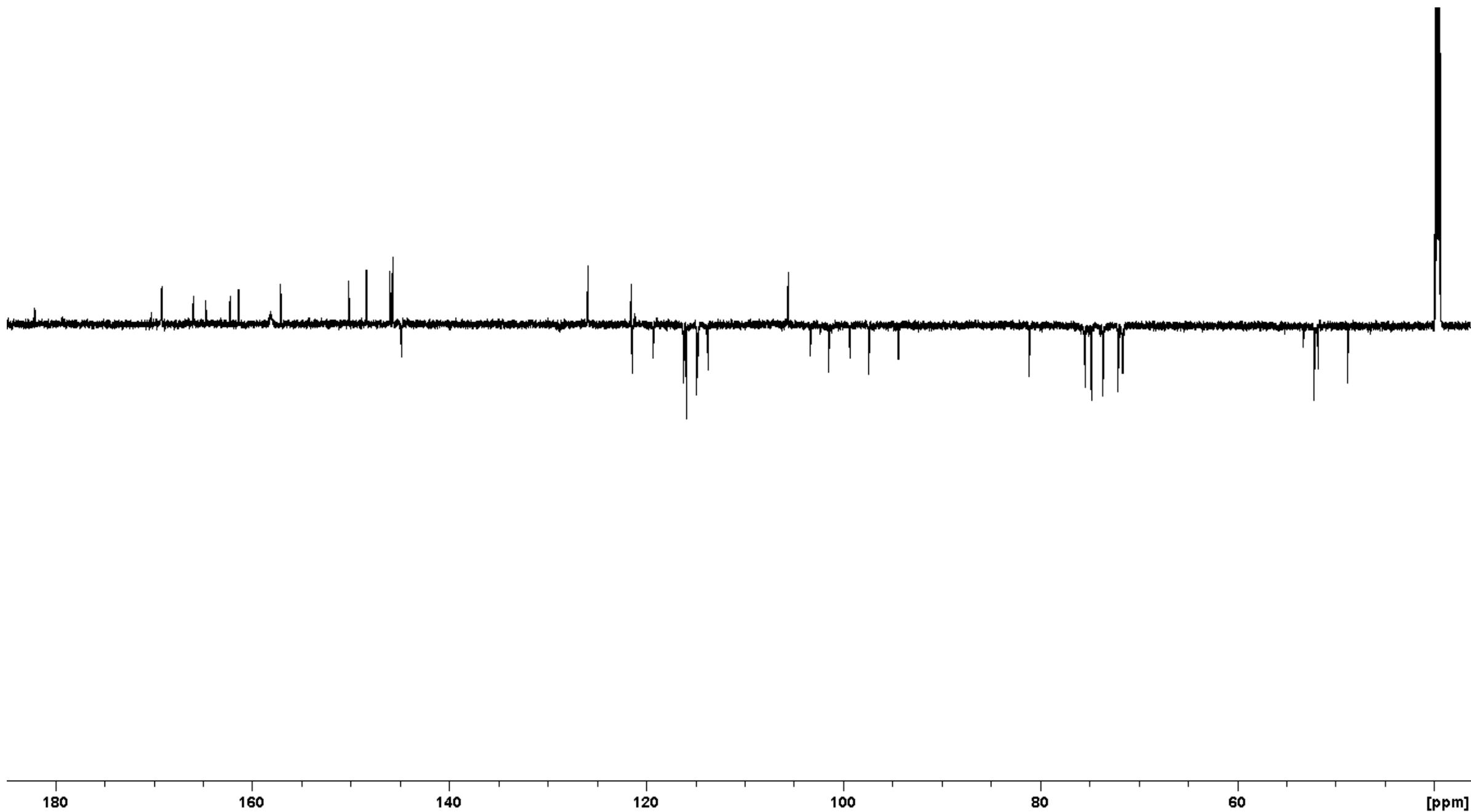
**Figure S10.** Mass spectrum of apigenin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**1**)



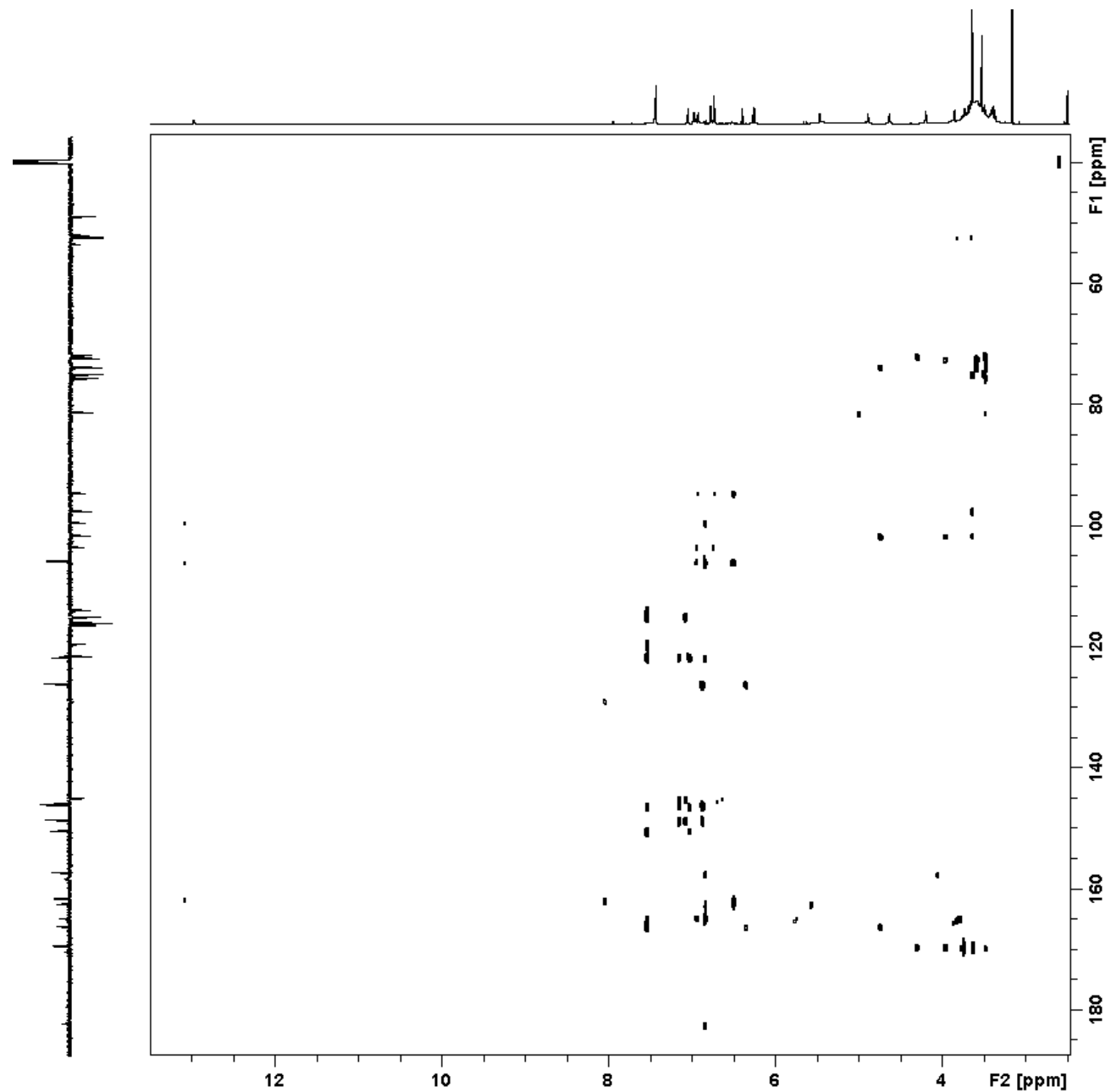
**Figure S11.** 1D  $^1\text{H}$  NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)



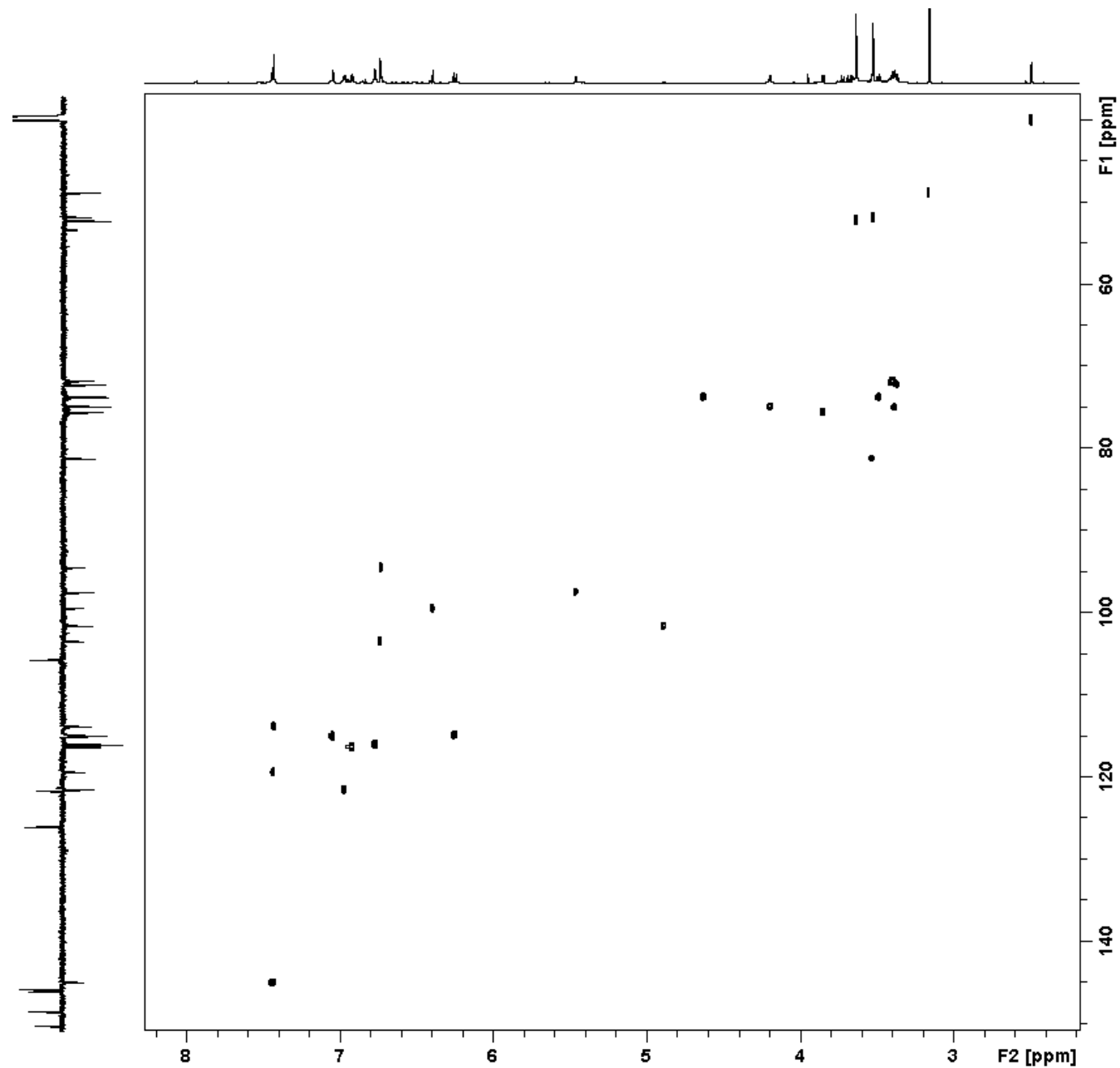
**Figure S12.** 1D  $^{13}\text{C}$  CAPT NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)



**Figure S13.** 2D  $^1\text{H}$ - $^{13}\text{C}$  HMBC NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)

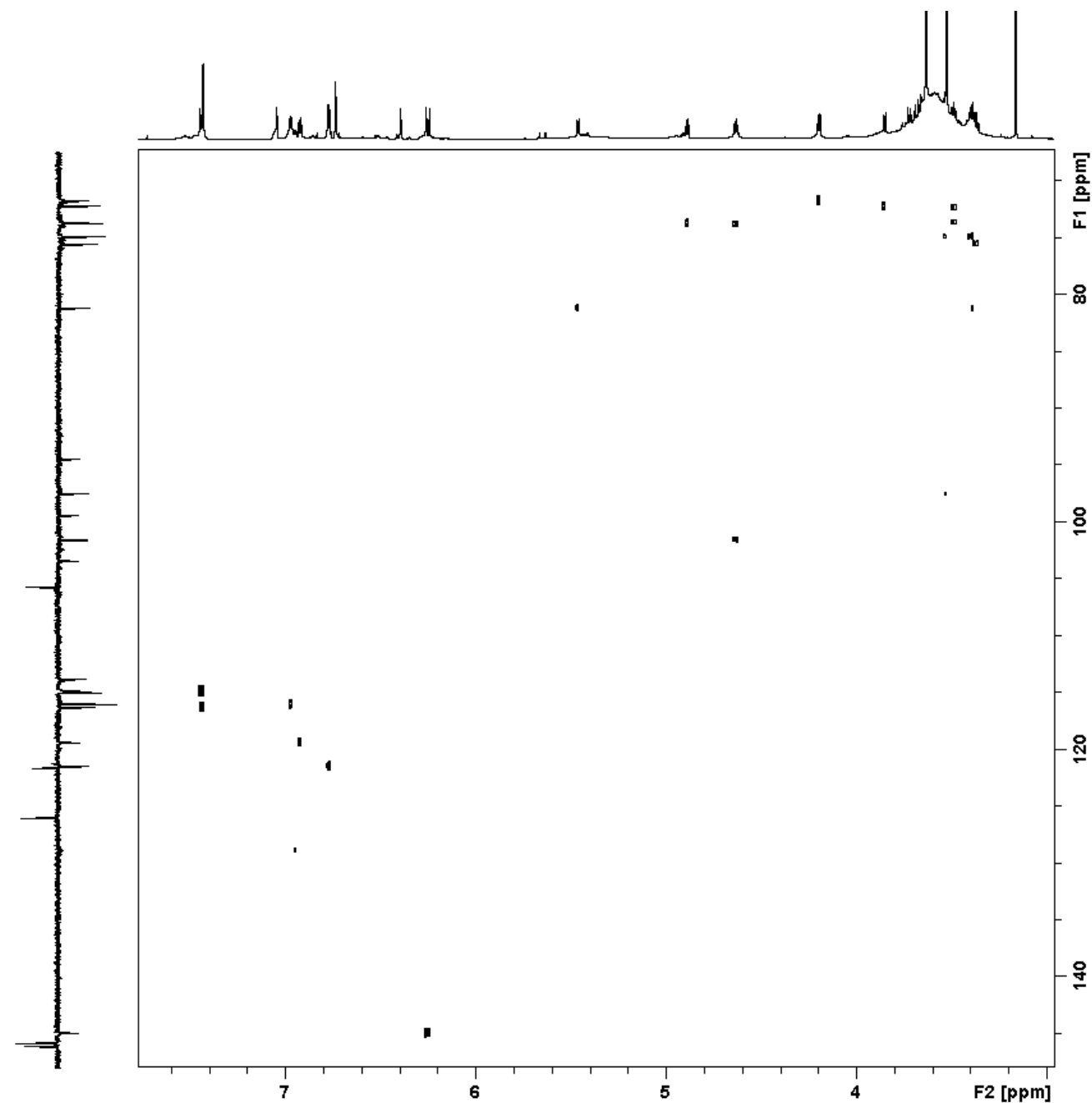


**Figure S14.** 2D  $^1\text{H}$ - $^{13}\text{C}$  edited HSQC NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)

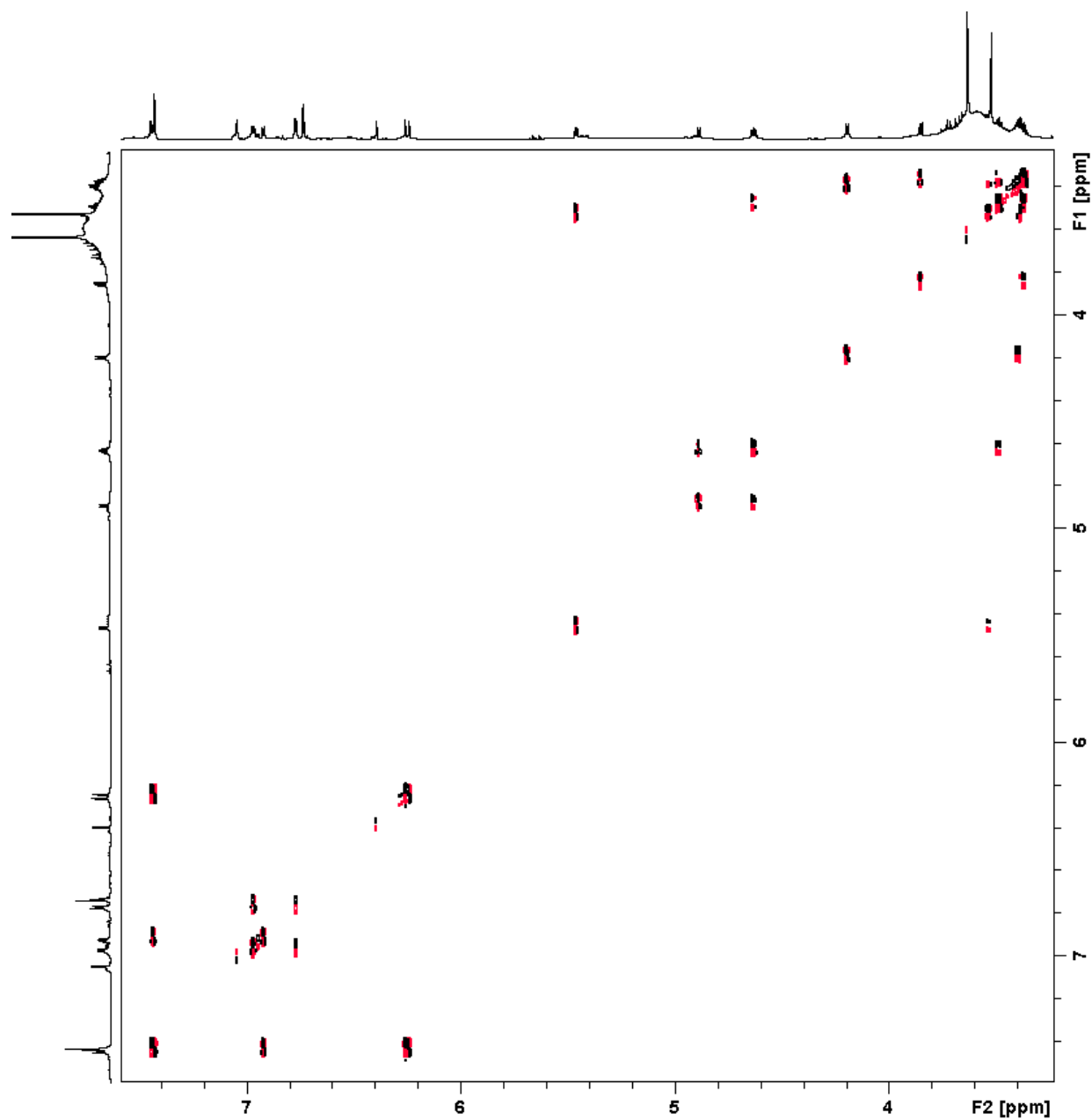




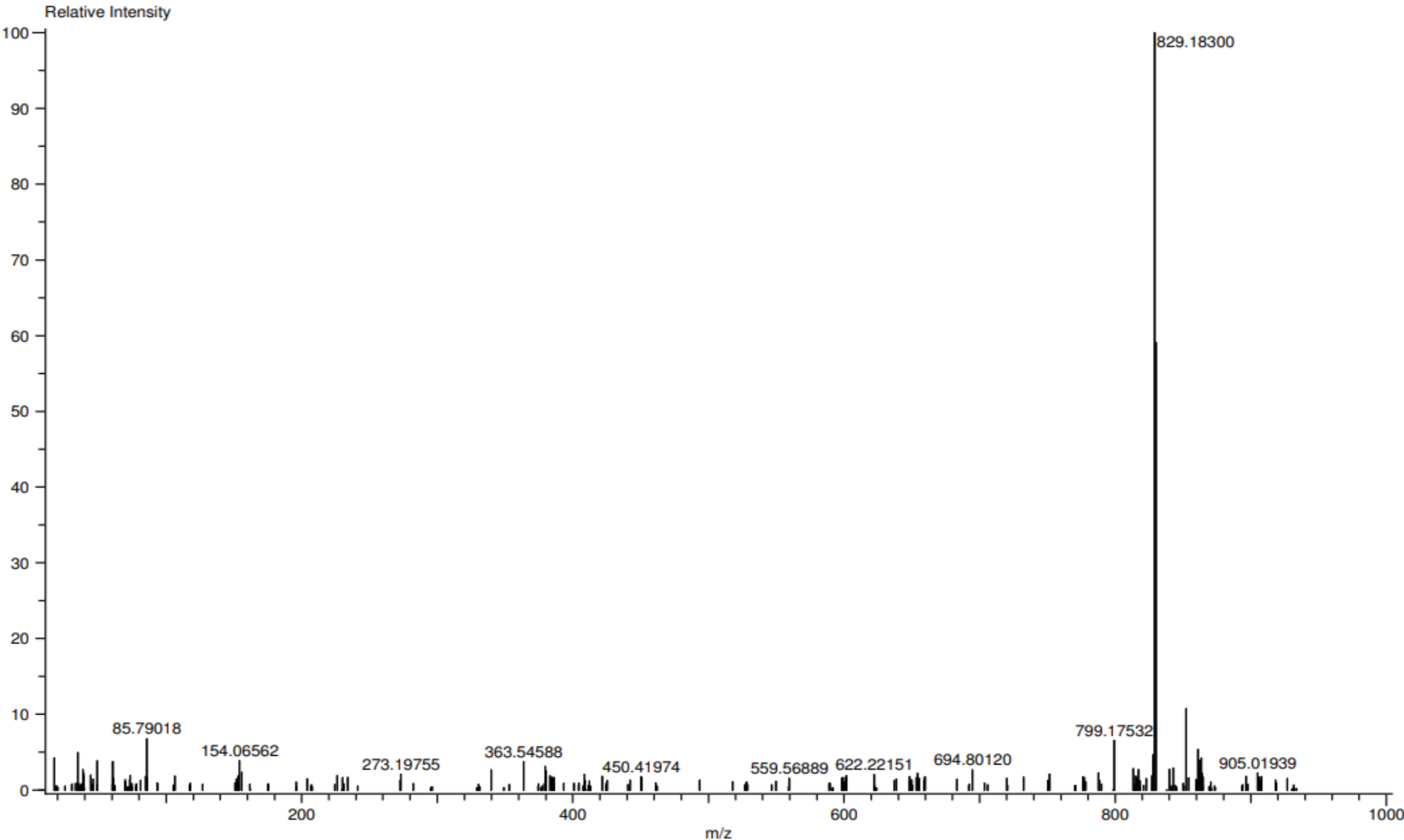
**Figure S15.** 2D  $^1\text{H}$ - $^{13}\text{C}$  H2BC NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)



**Figure S16.** 2D  $^1\text{H}$ - $^1\text{H}$  COSY NMR spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)- $\beta$ -glucuronopyranosyl)- $\beta$ -glucuronopyranoside) (**2**)



**Figure S17.** HR mass spectrum of the methyl ester form of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)-β-glucuronopyranosyl)-β-glucuronopyranoside) (**2**)



**Figure S18.** Mass spectrum of luteolin 7-*O*-(2''-*O*-(2'''-(*E*-caffeoyl)-β-glucuronopyranosyl)-β-glucuronopyranoside) (**2**)

