

Supplementary Data

Topical (+)-catechin emulsified gel prevents DMBA/TPA induced squamous cell carcinoma of skin by modulating antioxidants and inflammatory biomarkers in BALB/c mice

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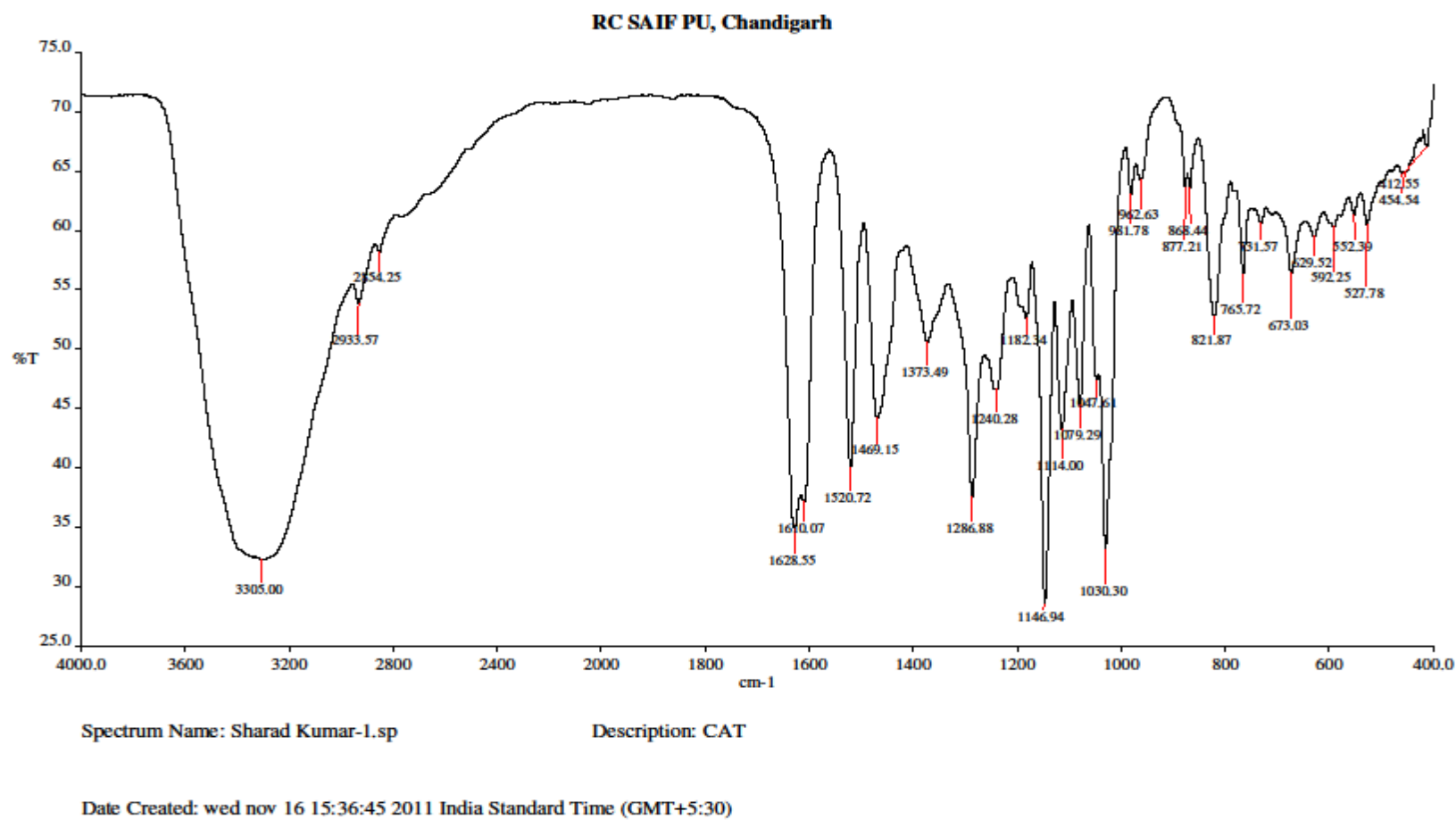


Fig. S1. FT-IR spectrum of isolated (+)-catechin

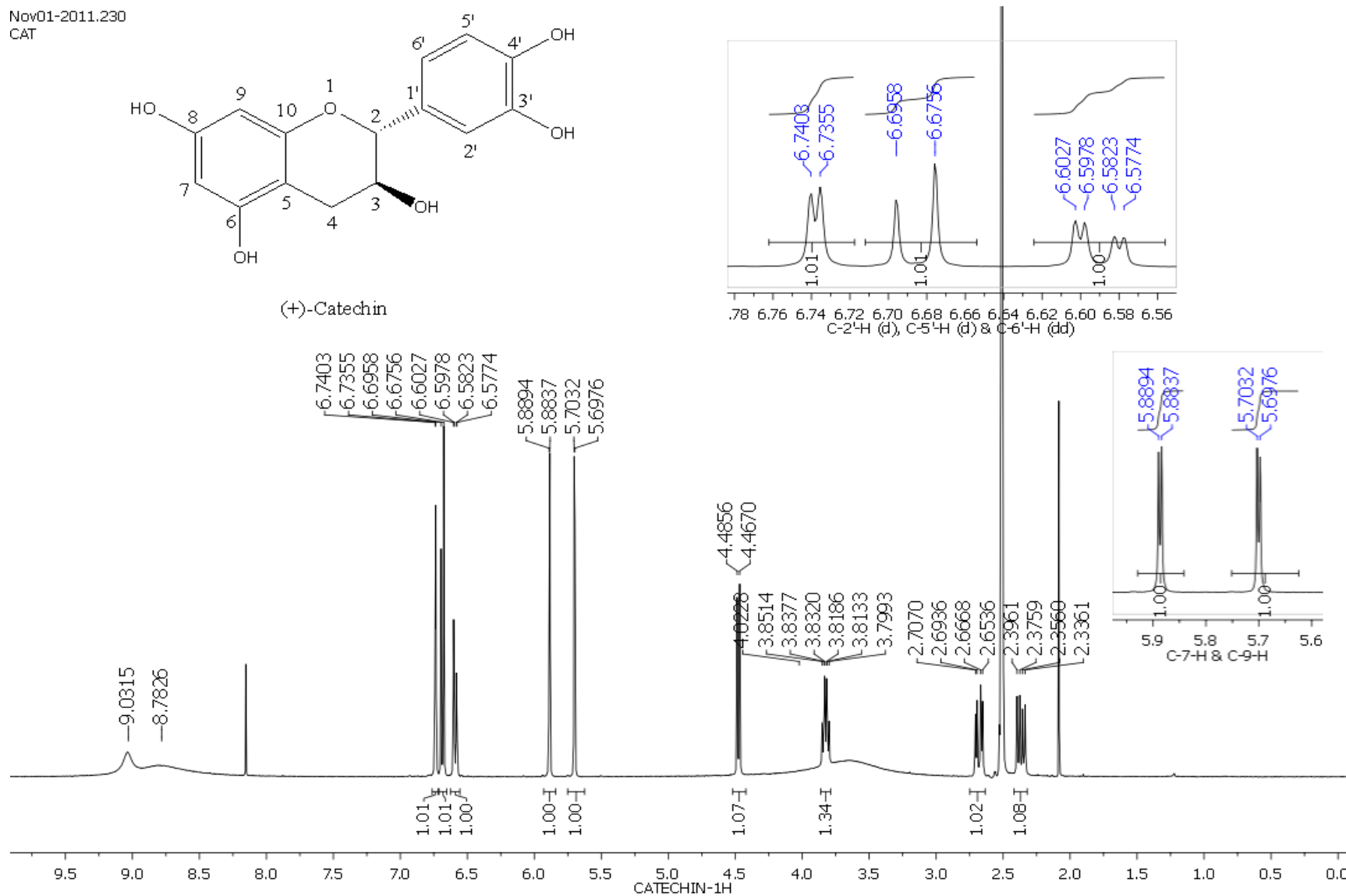


Fig. S2. ¹H NMR of isolated (+)-catechin (C₁₅H₁₄O₆) in a mixture of CDCl₃ & DMSO.d₆. Integration of five OH (s) is not shown.

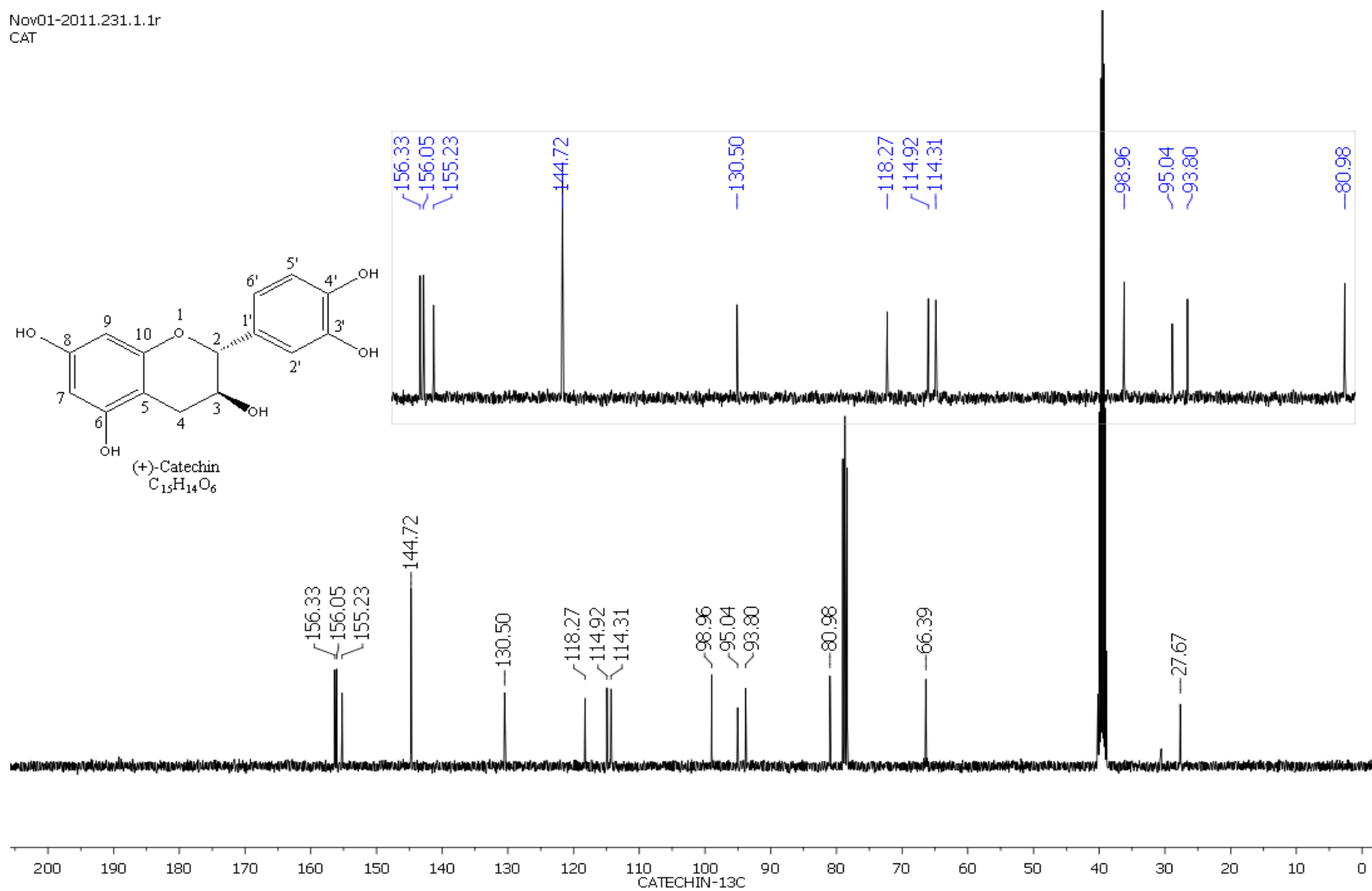


Fig. S3. ^{13}C NMR of isolated (+)-catechin ($C_{15}H_{14}O_6$) in a mixture of $CDCl_3$ & $DMSO-d_6$. C-4' & C-3' both appeared at 144.72 ppm; hence, 14 peaks of compound are visible in the spectrum.

SHARAD JIT-HPLC 31 (0.574) Cm (18:65)

TOF MS ES-
4.89e4

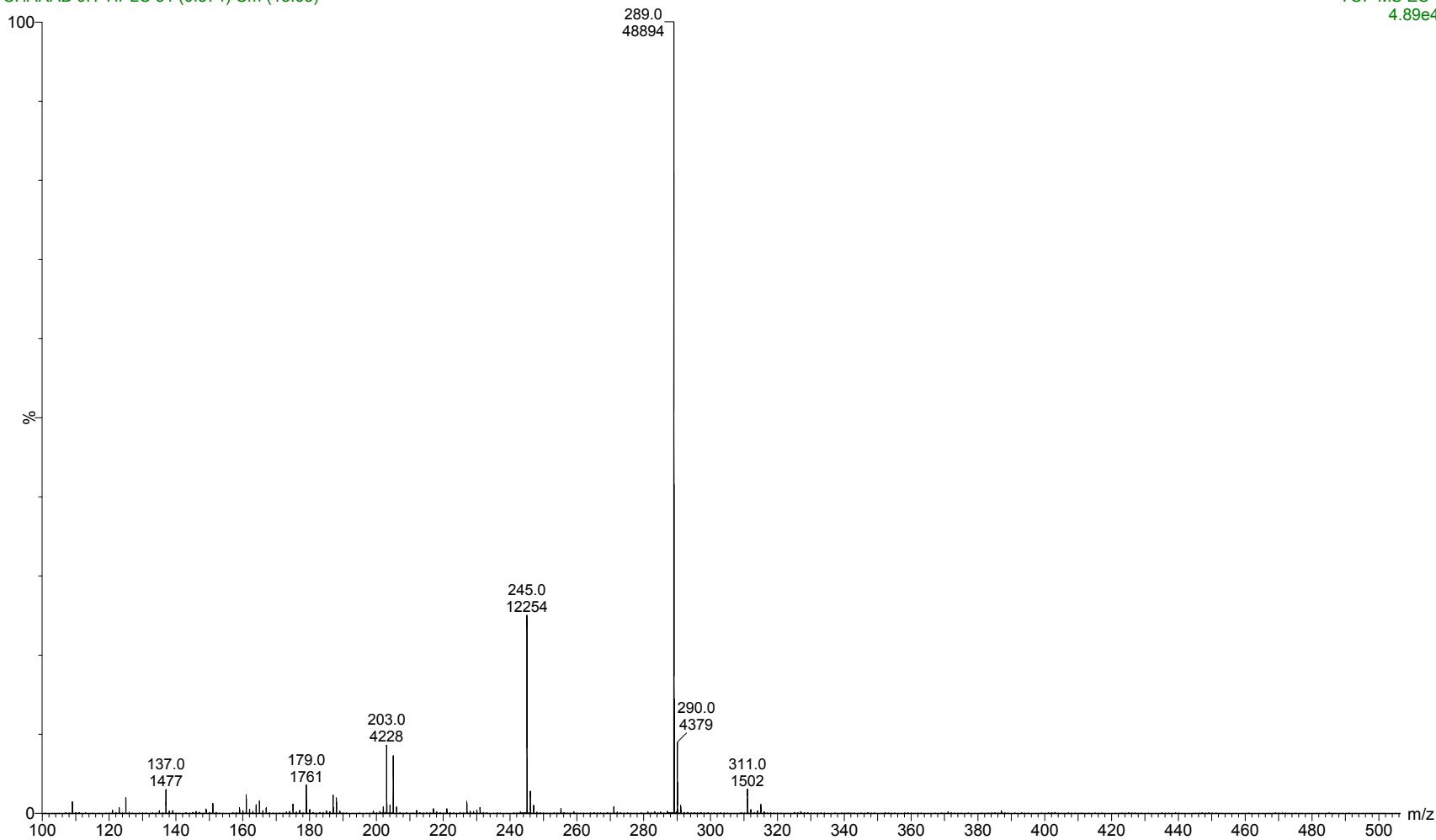
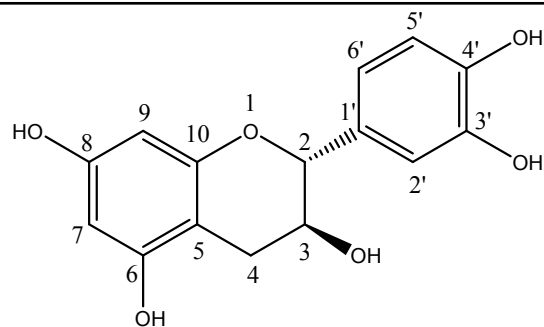


Fig. S4. Mass (ESI-MS) spectrum of isolated (+)-catechin in negative ion mode. Calculated exact mass: 290.1; Found: 290.1 (M^-) & 289.0 ($M^- - 1$) (100%).

Table S1: Complete ¹H and ¹³C NMR assignments of isolated (+)-catechin(+)–Catechin C₁₅H₁₄O₆

Hydrogen (s)	δ , ppm at 400 MHz	Carbon (s)	δ , ppm at 100 MHz	Carbon (s)	δ , ppm at 100 MHz
C-8, -6, -3' & -4'-OH	8.7826 & 9.0315 (4H, two broad signals, four OH groups)	C-8	156.33	C-2	80.98
H-2'	6.7355–6.7403 (1H, d, J = 1.92 Hz)	C-6	156.05	C-3	66.39
H-5'	6.6756–6.6958 (1H, d, J = 8.08 Hz)	C-10	155.23	C-4	27.67
H-6'	6.5774–6.6027 (1H, dd, J = 8.16, 1.96 Hz)	C-4' & C-3'	144.72		
H-7	5.8837–5.8894 (1H, d, J = 2.28 Hz)	C-1'	130.50		
H-9	5.6976–5.7032 (1H, d, J = 2.24 Hz)	C-6'	118.27		
H-2	4.4670–4.4856 (1H, d, J = 7.44 Hz)	C-2'	144.92		
C-3-OH	4.0228 (1H, broad signal)	C-5'	114.31		
H-3	3.7993–3.8514 (1H, m)	C-5	98.96		
H-4 _A	2.6536–2.7070 (1H, dd, J = 16.08, 5.36 Hz)	C-7	95.04		
H-4 _B	2.3361–2.3961 (1H, dd, J = 16.04, 8.08 Hz)	C-9	93.80		

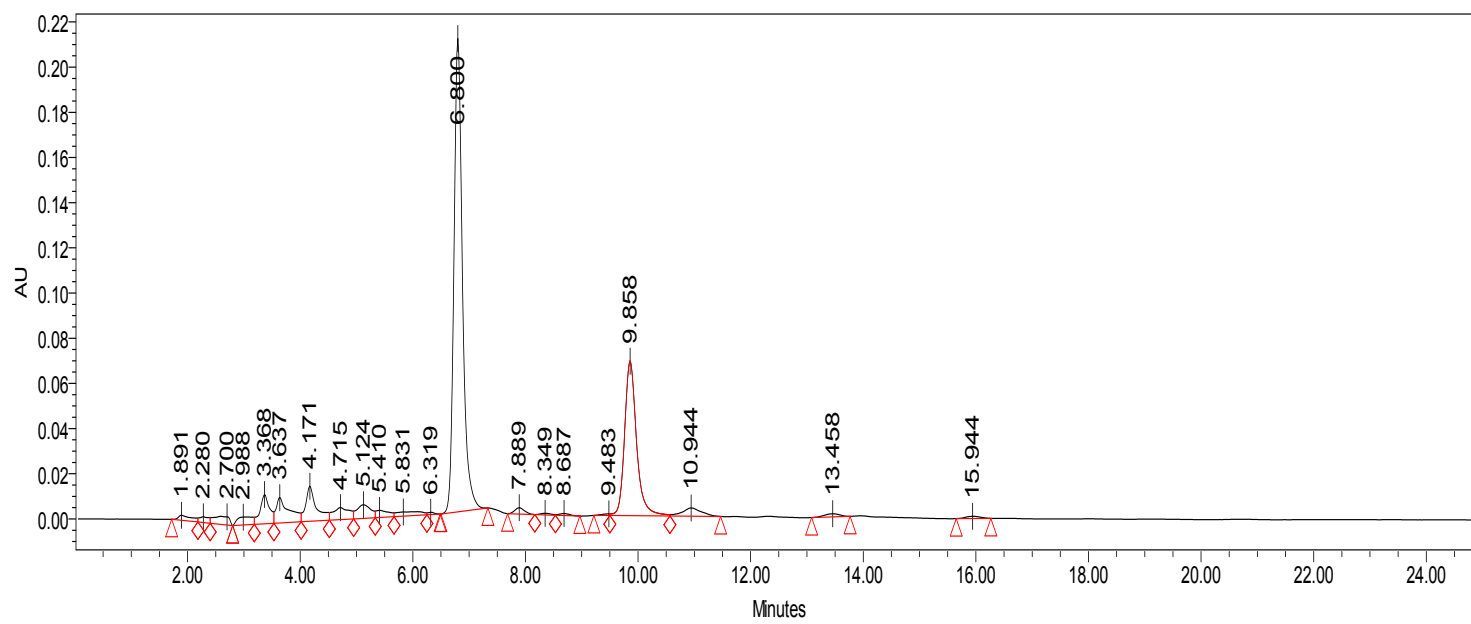


Figure S5. HPLC chromatogram of aqueous extract of *A. Catechu*

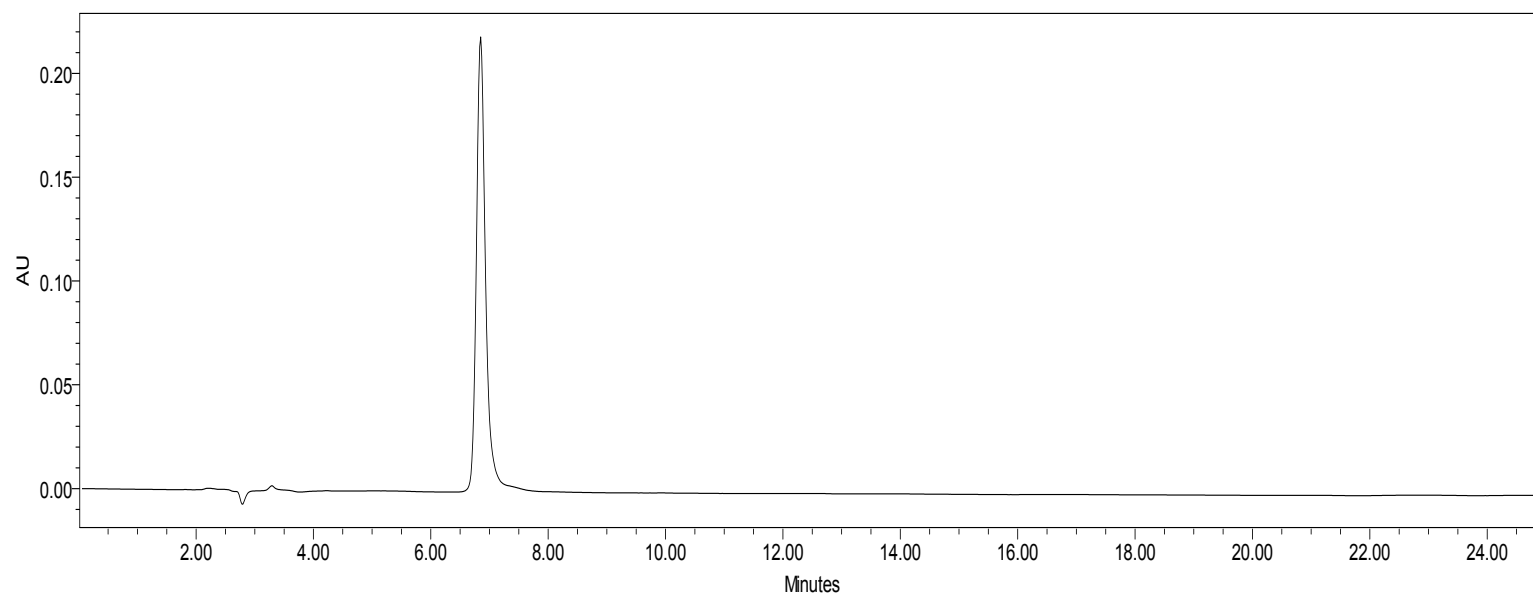


Figure S6. HPLC chromatogram of isolated (+)-catechin