Correlation between antioxidant activity and the garcinol content released from fruit rinds of endemic *Garcinia quaesita* Pierre on different cooking conditions

Donisha Shani Niharika Keembiya Liyanagamage,[1,2] Susanthi Jayasinghe,[1]*Anoja Priyadarshani Attanayake,[3] Veranja Karunaratne[1]

Supplementary file 1

The yellow crystalline compound isolated from hexane extract was identified as garcinol by UV, ^{1}H NMR, ^{13}C NMR, and LC-MS spectral data and by comparison with the literature data, mp 126 °C, UV in EtOH (log ϵ) 256 nm, 327 nm; IR 3200–3500, 1730, 1640 cm^{-1}; LC-MS was *m*/*z* 602 and $[\alpha]^{27} = -140^{0}$.

(Figure 1: ^{1}H NMR Spectrum for Garcinol, Figure 1: ^{13}C NMR Spectrum for Garcinol, Figure 3; IR Spectrum for Garcinol)

The identification of compound was substantiated by the presence of some characteristic proton and carbon signals on the ^{1}H NMR and ^{13}C NMR Spectra (Table 1). All the data above along with the UV, NMR, IR and melting point agreed with reported garcinol characterization.

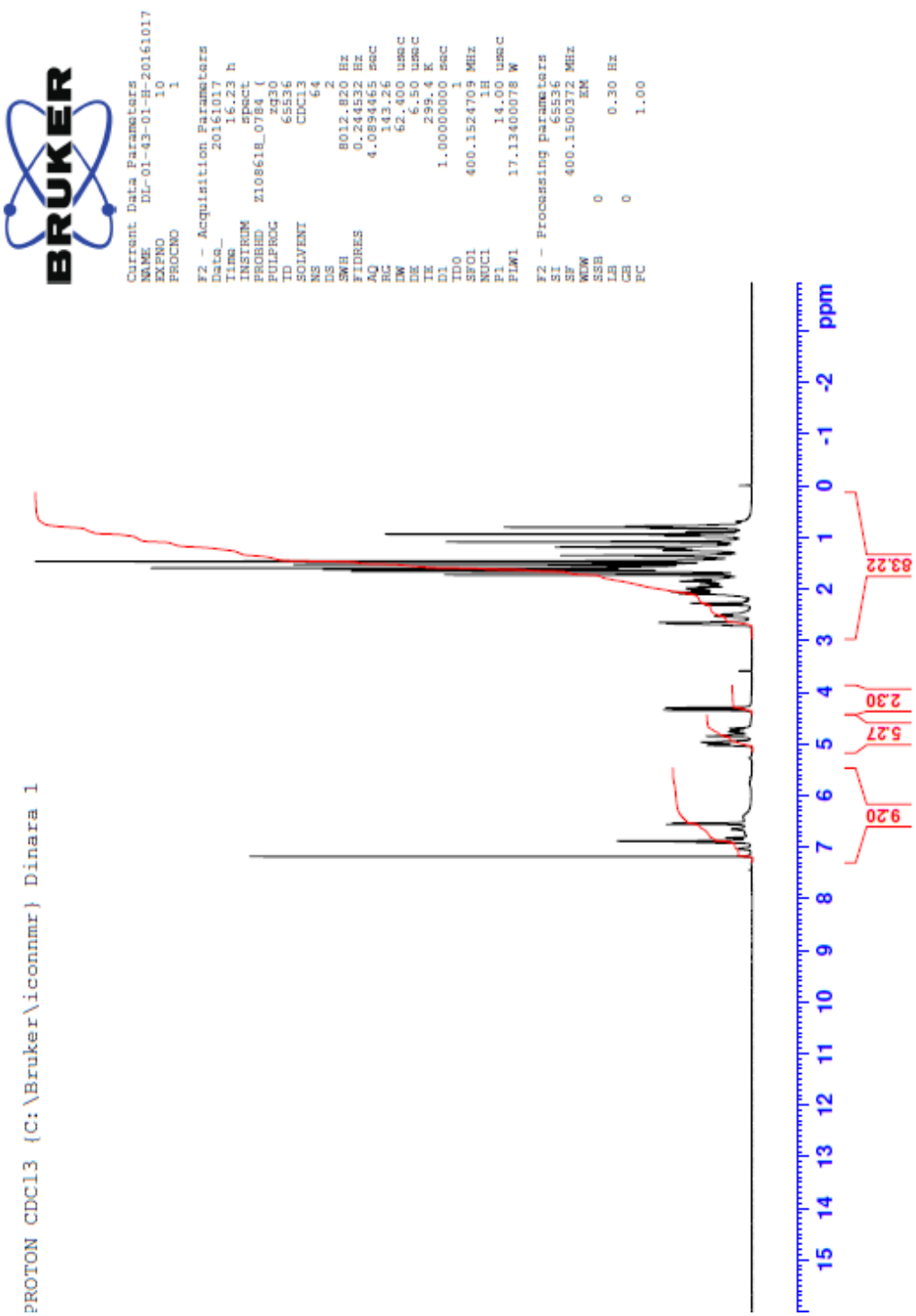

Figure 1: ^{1}H NMR Spectrum for Garcinol

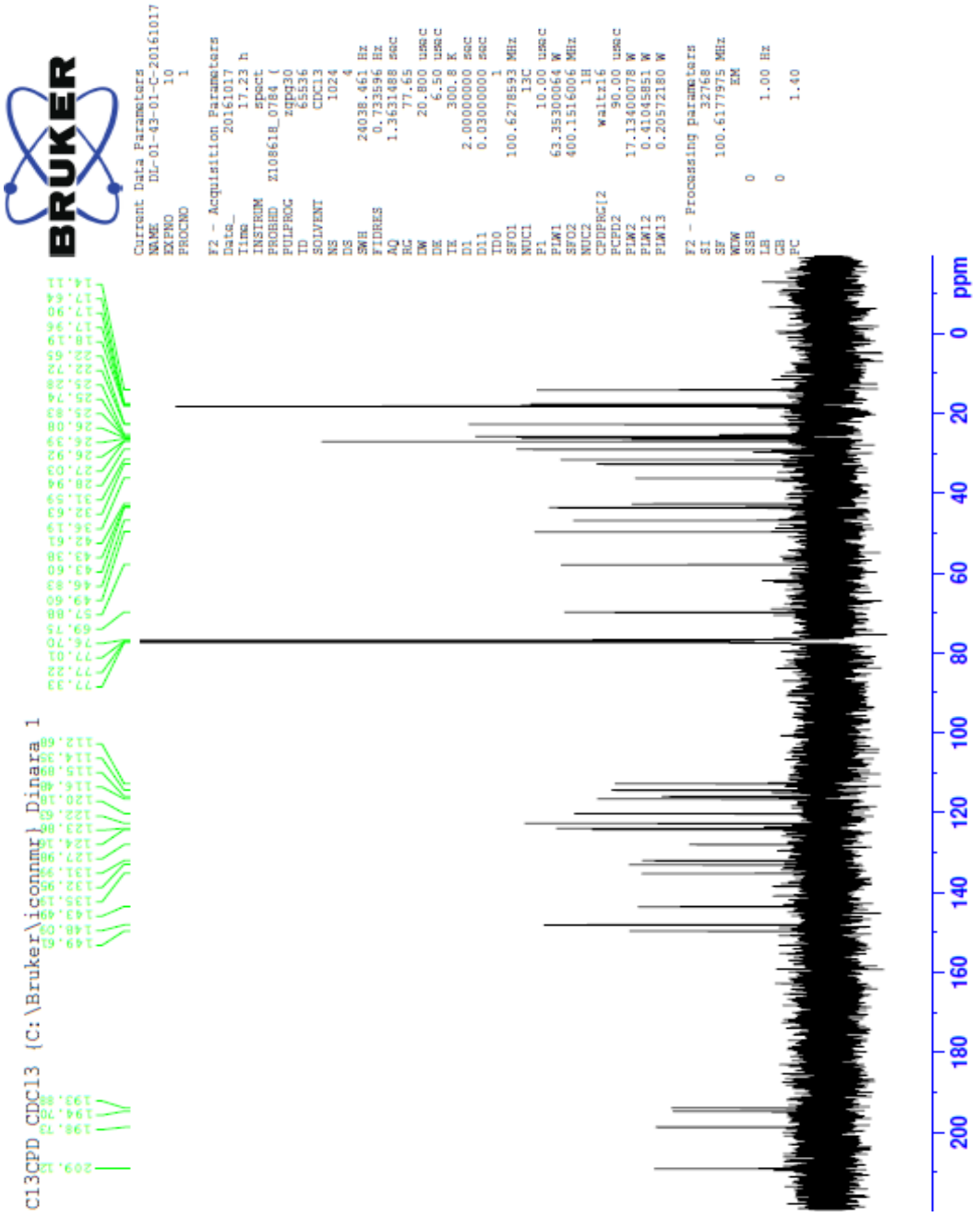

Figure: ^{13}C NMR Spectrum for Garcinol

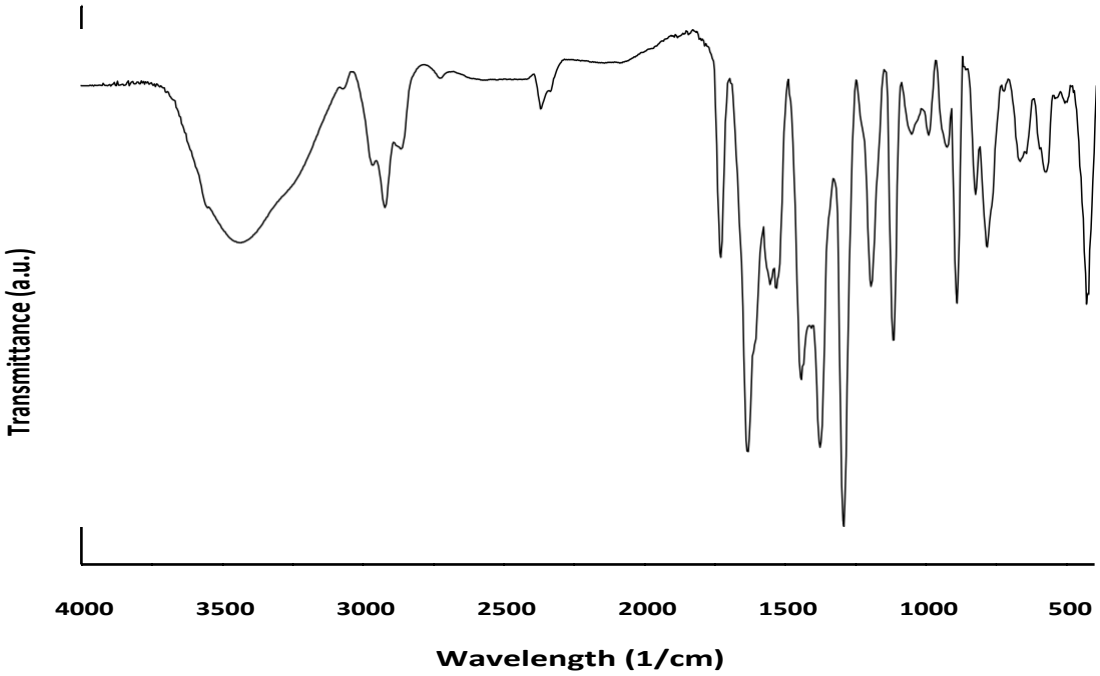

Figure 3: IR Spectrum for Garcinol

Table 1: 1H and 13C NMR data of garcinol in Chloroform (δ in ppm)

Position	^{1}H Garcinol	^{13}C Garcinol
1	-	69.5
2	-	192.0
3	-	117.9
4	16.77 s	196.1
5	-	59.7
6	1.84, 1.82 d	43.8
7	1.81 s	48.3
8	0.99, 0.99 d	48.5
9	-	209.9
10	2.40, 2.15 d	26.5
11	5.20 t	120.8
12	-	134.8
13	1.82 s	18.6
14	1.70 s	24.6
15	-	194.9
16	-	130.3
17	7.23 s	117.0
18	5.35 d	146.5
19	5.35 d	158.1
20	7.17 d	117.8
21	7.61 d	123.9
22	1.53 d	37.3
23	2.20 m	45.2
24	2.08, 1.83 t	33.5
25	5.20 t	125.1
26	-	131.3
27	1.70 s	18.61
28	-	147.7
29	5.11, 4.92 s	110.6
30	1.82 t	21.5
31	1.82 d	24.6
32	2.04, 1.79 d	29.0
33	5.20 t	123.5
34	-	131.3
35	1.82 d	18.6
36	1.70 d	24.6

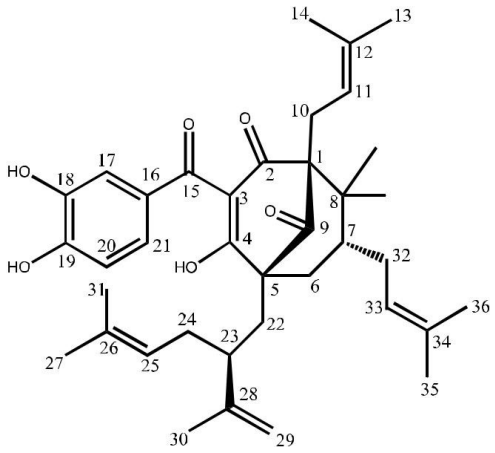

Figure 4: Structure of garcinol