

Supplementary material

Figures and Tables

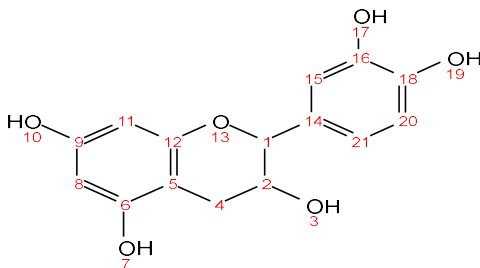


Figure S1: Structural formula of catechin

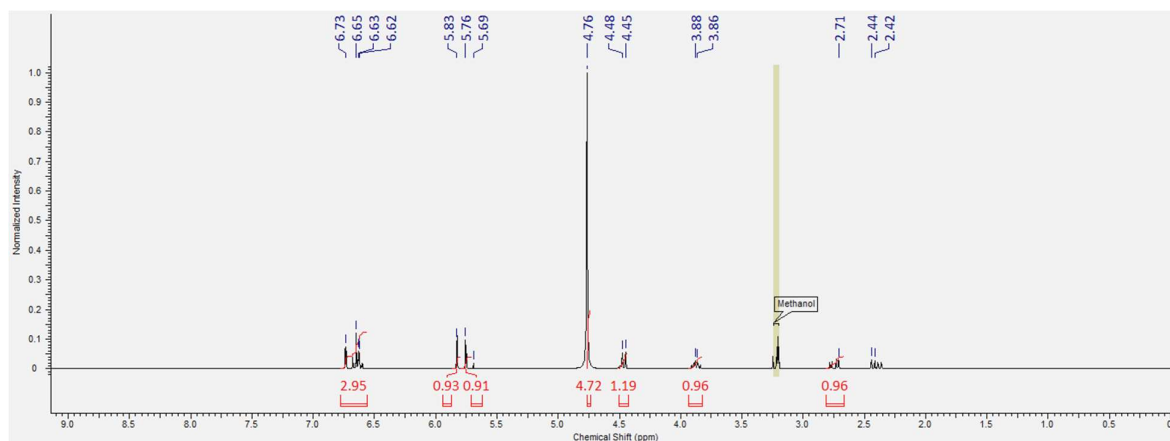


Figure S2: ¹H NMR (METHANOL-d₄, 300MHz) of isolated compound catechin

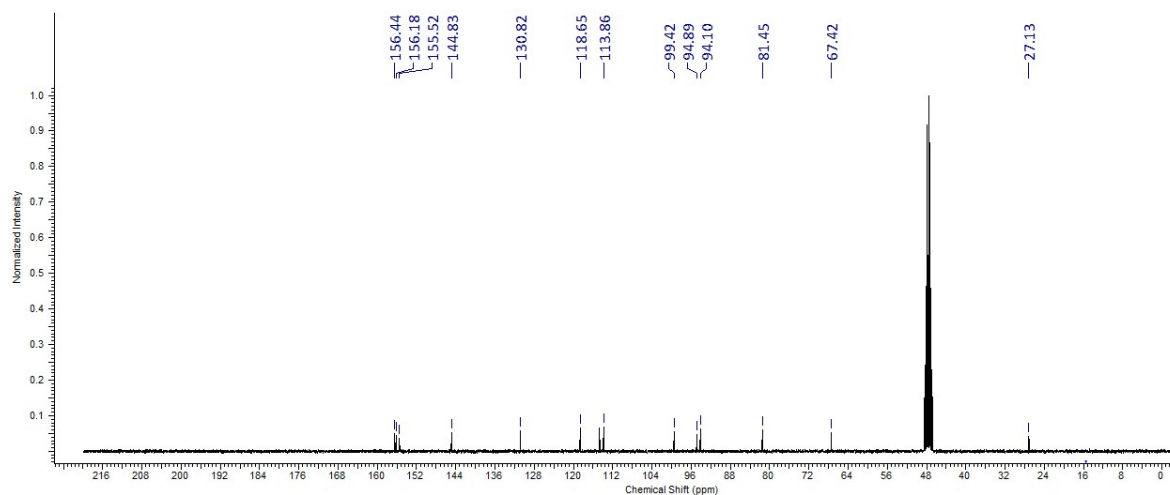


Figure S3: ¹³C NMR (METHANOL-d₄, 75MHz) of isolated compound catechin

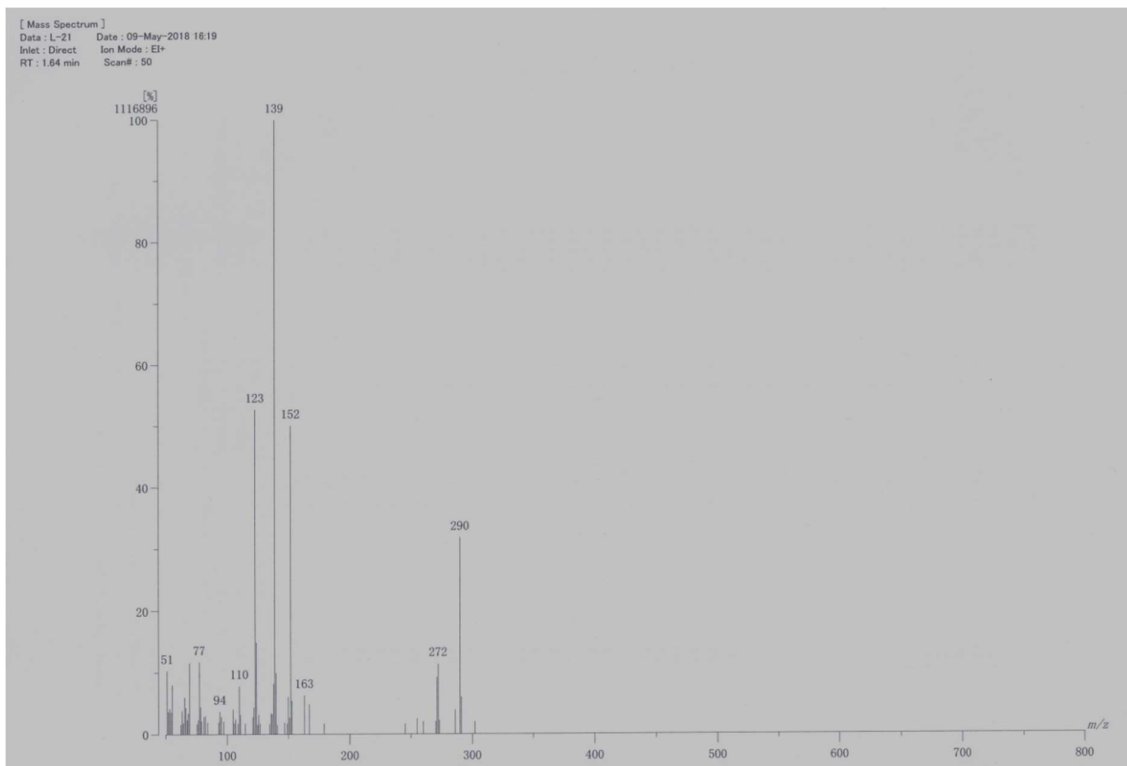


Figure S4: EIMS of isolated compound catechin

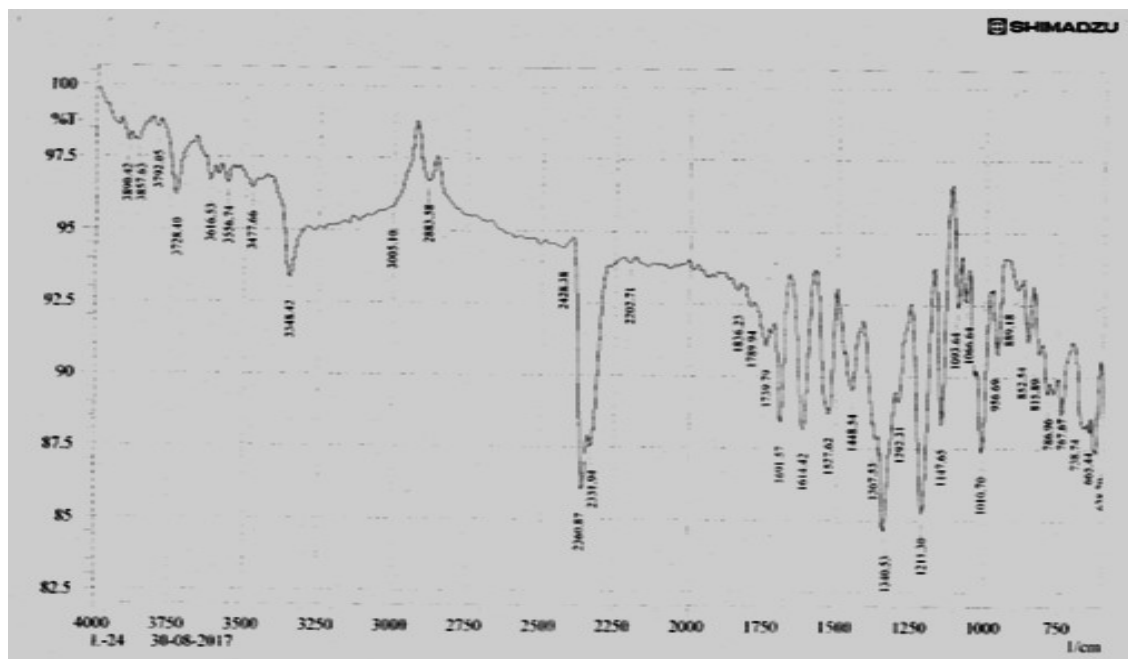


Figure S5: FTIR spectra of isolated compound catechin

Table S1. % DPPH and ABTS free radical scavenging activity of catechin isolated from *Elaeagnus umbellata* fruit at various concentrations.

Samples	Concentration (µg/mL)	%DPPH scavenging Mean ±SEM	IC ₅₀ (µg/mL)	%ABTS scavenging Mean ± SEM	IC ₅₀ (µg/mL)
CTN	1000	65±1.35***	67	59±1.5**	72
	500	50±1.1***		46±1.8***	
	250	44±0.5***		41±0.8***	
	125	37±0.4***		36±1.4***	
	62.5	31±1.0***		28±1.2***	
	31.25	29± 1.4***		21±1.5***	
Ascorbic acid	1000	86±0.5	30	85±0.5	32
	500	77±1.0		80±1.1	
	250	80±0.4		78±0.5	
	125	77±0.7		70±1.3	
	62.5	73±1.2		64±1.1	
	31.25	69±0.8		56±0.4	

CTN, Catechin. Note: The data is represented as Mean ± SEM, n=3. Values are significantly different as compared to positive control *P< 0.05, **P< 0.01, ***P< 0.001.

Table S2. % α-amylase and α-glucosidase inhibition potential of catechin isolated from of *Elaeagnus umbellata* fruit at various concentrations.

S.No	Sample	Concentration (µg/mL)	% α-amylase inhibition	α-amylase IC ₅₀ µg/mL	% α-glucosidase inhibition	α-glucosidase IC ₅₀ µg/mL
			Mean ± SEM		Mean ± SEM	
1	CTN	1000	83±0.8***	38	85±1.5***	32
		500	77±0.5***		77±0.4***	
		250	69±1.5***		70±0.8***	
		125	63±1.8***		66±0.5***	
		62.5	54±0.5***		58±1.8***	
		31.05	45±1.4***		50±1.5***	
2	Standard Acarbose	1000	90±1.1	30	89±0.4	26
		500	83±0.8		82±0.8	
		250	75±0.2		77±0.5	
		125	69±0.5		71±1.1	
		62.5	62±0.2		68±0.6	
		31.05	48±1.2		60±0.3	

CTN, Catechin. Note: The data is represented as Mean \pm SEM, n=3. Values are significantly different as compared to positive control *P<0.05, **P<0.01, ***P<0.001.