

1 Article

2 **Supplementary materials: Antioxidant Activities of *Dialium indum* L. Fruit and Gas
3 Chromatography-Mass Spectrometry (GC-MS) of the Active Fractions**4 **Muhamad Faris Osman¹, Norazian Mohd Hassan^{1,*}, Alfi Khatib¹ and Siti Marponga Tolos²**5 ¹ Department of Pharmaceutical Chemistry, Kulliyyah of Pharmacy, International Islamic University Malaysia, Kuantan 25200, Pahang, Malaysia; farisosman@iium.edu.my
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Table S1. Condition parameters for GC optimization.

Condition	Initial T (T ₀)	Initial t (t ₀)	Rate to T ₁	Final T (T ₁)	Final t (t ₁)	Rate to T ₂	Final T (T ₂)	Final t (t ₂)
	(°C)	(min)	(°C/min)	(°C)	(min)	(°C/min)	(°C)	(min)
A1	50	6	10	180	34	50	315	5
B1	50	10	5	90	10	5	250	0
C1	50	12	5	90	10	5	250	10
C2	50	12	5	100	10	5	250	10
C3	50	12	5	120	10	5	250	10
C4	50	12	5	120	10	5	300	10
C5	50	12	5	150	10	5	250	10
D1*	100	12	5	140	10	5	250	10
D2	100	12	5	150	10	5	250	10
D3	100	12	5	160	10	5	250	10
D4	100	12	5	170	10	5	250	10
D5	100	12	5	180	10	5	250	10
D6	100	12	5	190	10	5	250	10

26 * Optimum condition. A condition is considered optimum when the chromatogram shows best peaks separation (no overlapping) and number of phenolics
 27 identified with similarity index of 90 and above is the highest.
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Table S2. Mass spectra data of metabolites identified in SMF and EDF.

Compound (TMS derivative)	Ions, <i>m/z</i> (rel. intensity, %)	Ions, <i>m/z</i> (rel. intensity, %) from literature	Reference
Amino acids			
Proline	216(8), 147(9), 143(13), 142(100), 73(29)	216, 186, 142	[27]
Serine	218(62), 205(19), 204(100), 147(17), 73(51)	306, 218, 204	[27]
Threonine	291(41), 219(84), 218(93), 117(44), 73(100)	291	[29]
Pyroglutamic acid	258(13), 157(13), 156(100), 147(16), 73(33)	156, 147, 73	[34]
Phenylalanine	219(20), 218(100), 192(65), 147(17), 73(56)	218	[29]
Glutamic acid	247(21), 246(100), 128(17), 147(17), 73(42)	246	[29]
Organic acids			
Tartaric acid	293(19), 292(66), 219(30), 147(62), 73(100)	292	[31]
Malic acid	245(23), 233(37), 147(78), 133(17), 73(100)	335, 233	[27]
Azelaic acid	317(100), 201(49), 126(36), 75(87), 73(99)	317(M ⁺), 201(30), 129(26), 55(40), 73(100), 43(30)	[26]
Fatty acids			
Palmitic acid	313(100), 129(29), 117(55), 75(34), 73(46)	313, 117	[27]
Linoelaidic acid	337(86), 81(45), 75(83), 73(100), 67(47)	337, 81, 75, 73, 67	
Oleic acid	339(100), 129(57), 117(62), 75(62), 73(87)	339, 129, 117	[27]
Stearic acid	341(100), 132(30), 117(55), 75(34), 73(47)	341, 129, 117	[27]
Myristic acid	285(100), 129(32), 117(59), 75(41), 73(55)	285, 129, 117	[27]
Palmitelaidic acid	311(100), 129(61), 117(57), 75(68), 73(78)	311, 129, 117, 75, 73	[34]
Margaric acid	327(100), 129(36), 117(59), 75(42), 73(65)	327, 129, 117	[27]
cis-Vaccenic acid	339(100), 129(47), 117(43), 75(50), 73(55)	339, 129, 117, 75, 73	[34]
Tocopherol			
δ-Tocopherol	474(100), 209(24), 208(21), 73(28)	474	[36]

Table S2. (Continued).

Compound (TMS derivative)	Ions, <i>m/z</i> (rel. intensity, %)	Ions, <i>m/z</i> (rel. intensity, %) from literature	Reference
Polyol			
<i>myo</i> -Inositol	246(16), 218(20), 217(100), 147(22), 73(39)	217, 147, 73	[32]
Sesquiterpene			
α -Cyperone	280(15), 220(9), 219(20), 218(100), 73(31)	218	[33]
Saccharides			
Sucrose	362(31), 361(100), 217(34), 147(17), 73(47)	361	[28]
β -D-Galactofuranose	218(20), 217(100), 191(17), 147(18), 73(39)	217, 191, 147, 73	[34]
β -D-Glucopyranose	205(19), 204(100), 191(39), 147(20), 73(40)	217, 204, 191, 147, 73	[34]
D-glucose	217(27), 204(100), 191(50), 147(21), 73(44)	307, 204	[28]
Phenolics			
Sinapic acid	368(100), 338(79), 312(45), 131(84), 73(82)	368, 353, 338, 249, 207, 161, 73	[35]
<i>p</i> -Hydroxybenzaldehyde	194(77), 179(100), 151(61), 75(24), 73(47)	194(77), 179(100), 151(62)	[24]
Vanillin	224(31), 209(46), 195(16), 194(100), 193(51)	224(33), 209(48), 194(100)	[24]
Syringic aldehyde	254(30), 239(43), 225(17), 224(100), 223(28),	254(32), 239(46), 224(100)	[24]
Vanillic acid	312(63), 297(100), 267(64), 253(40), 223(46)	312(68), 297(100), 282(29), 267(65), 253(41), 223(43)	[24]
Coniferyl aldehyde	250(88), 220(100), 219(78), 192(51), 73(41)	250(94), 235(38), 220(100), 192(51)	[24]
Syringic acid	342(76), 327(100), 312(71), 297(55), 73(45)	342(80), 327(100), 312(70), 297(54), 253(33)	[24]
Ferulic acid	338(56), 323(40), 308(29), 223(100), 73(52)	338, 323, 308, 293, 249, 219	[25]
Isoferulic acid	338(100), 323(58), 308(48), 223(61), 73(60)	338, 323, 249, 161	[30]

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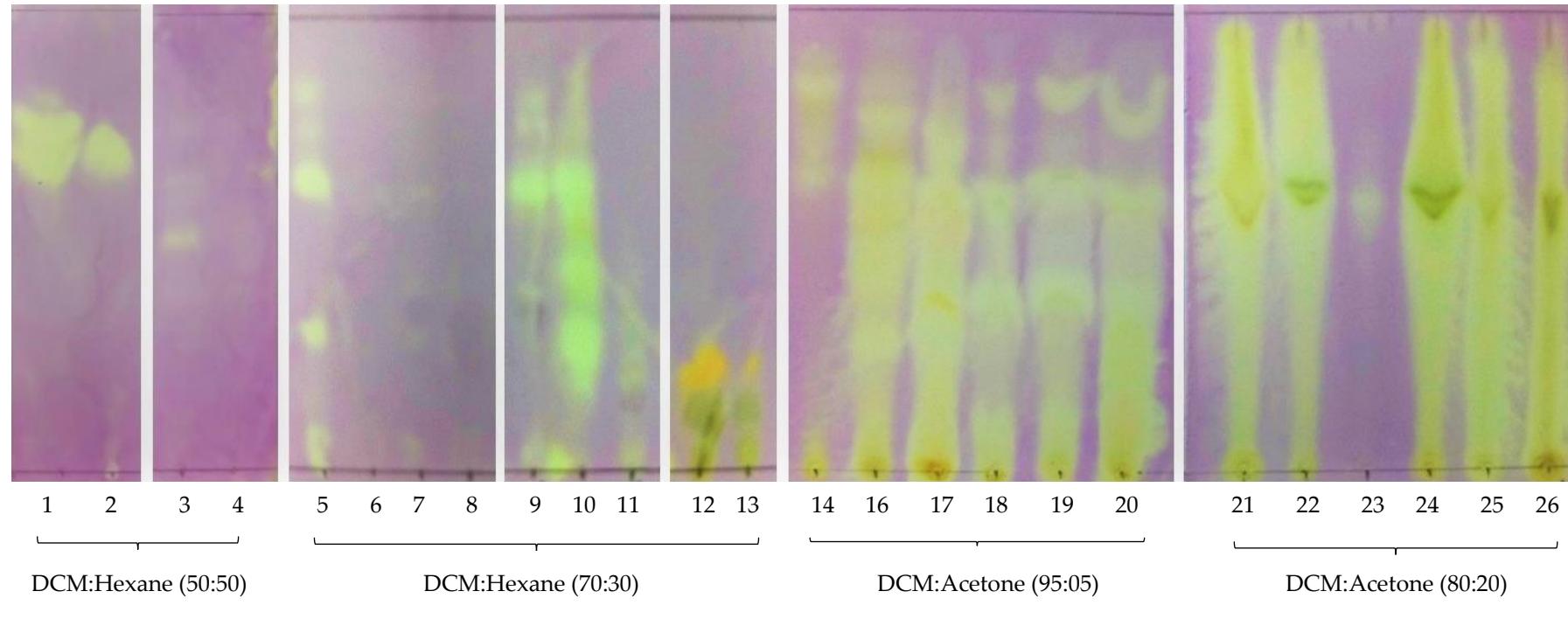


Figure S1. TLC antioxidant bioautograms of EDF subfractions (Di-1-Di-26) sprayed with 0.4 mM DPPH in methanol. Chromatographic conditions: aluminium TLC plate, silica gel 60 Å of 200 µm thickness, coated with fluorescent indicator F₂₅₄. Solvent systems are as labelled.