

Table S1: Selected data on the main fatty acids and phenolics profiles of Areceaceae seeds

Species	FA% of total FA <sup>a</sup>	Main Phenolics <sup>a</sup>	Total Phenolics <sup>a</sup>	Total oil/FA	Reference
<b>Subfamily Arecoideae</b>					
<b>Tribe Areceae</b>					
<i>Archontophoenix cunninghamiana</i>	PA 15, SA 7.9, OA 48.3, LA 23.5, ALA 1			3.39	Ndukwe and Ugboaja, 2019
<i>A. cunninghamiana</i>	PA 15, SA 8, OA 48, LA 24, ALA 1			3.4	Ndukwe and Ugboaja, 2019
<i>A. cunninghamiana</i>	LaA 5, MA 4, PA 17, SA 2, OA 34, LA 37, ALA 1			3.3	Guerin et al., 2020
<i>Chambeyronia microspadix</i>	LaA 5, MA 17, PA 18, SA 4, OA 31, LA 23			6.6	Guerin et al., 2020
<i>Dypsis lutescens</i> (syn. <i>Chrysalidocarpus lutescens</i> )	CA 1, LaA 41, MA 27, PA 12, SA 1, OA 11, LA 8			2.3	Daulatabad and Ankalgi, 1983
<i>Howea forsteriana</i>	CyA 2, CA 2, LaA 46, MA 12, PA 6, SA 3, OA 21, LA 9			13.7	Litchfield, 1970
<i>H. forsteriana</i>	CyA 1, CA 1, LaA 34, MA 13, PA 9, SA 4, OA 25, LA 13			10.3	Guerin et al., 2020
<b>Tribe Chamaedoreae</b>					
<i>Chamaedorea microspadix</i>	LaA 5, MA 17, PA 18, SA 4, OA 31, LA 23			4.5	Guerin et al., 2020
<b>Tribe Cocoseae</b>					
<i>Butia capitata</i>				59.5	Litchfield, 1970
<i>B. capitata</i>	CyA 16, CA 16, LaA 39, MA 6, PA 4, SA 3, OA 12, LA 4			59.6	Opute, 1979
<i>B. capitata</i>	CyA 8, CA 11, LaA 39, MA 8, PA 5, SA 2, OA 21, LA 5			52	Vieira et al., 2016
<i>B. capitata</i>	CyA 14, CA 16, LaA 36, MA 7, PA 5, SA 2, OA 17, LA 4			59.0	Guerin et al., 2020
<i>Cocos nucifera</i>	CO 1, CY 10, CA 6.8, LaA 48, MA 19, PA 8, SA 2, OA 5, LA1 mol%			65-72	Litchfield, 1970

<i>C. nucifera</i>	CyA 12, CA 16, LaA 43, MA 6, PA 4, SA 3, OA 12, LA 4		66.5	Opute, 1979
<i>C. nucifera</i>	CyA 10, CA 6, LaA 52, MA 19, Caf 3, CiA 2, Cou 10, Fer 2, Gal 25, HBA 8, Syr 18, 1.4 mg/100 g PA 7, SA 4, OA 4, LA 1 VanA 64 µg/100 g		60	Appaiah et al., 2014
<i>C. nucifera</i>	CA 4, LaA 52, MA 22, PA 9, SA 3, OA 9	8 mg GAE/100 g DW	72	Ghosh et al., 2014
<i>C. nucifera</i>	-	Caf 4, Cat 2, mCou 1, pCou 3, Gal 3, pHBA 3, Sal 3, 6-10 mg GAE/100 g FW Syr 1	24	Mahayothee et al., 2016
<i>C. nucifera</i>	CyA 3, CA 6, LaA 51, MA 18, PA - 10, SA 4, OA 7, LA 1	-	28-32	Ngampeerapong and Chavasit, 2019
<i>C. nucifera</i>	CyA 9, CA 7, LaA 49, MA 18, PA 9, SA 3, OA 4, LA 1		62.6	Guerin et al., 2020
<i>Syagrus romanzoffiana</i>	CyA 7, CA 6, LaA 33, MA 10, PA 8, SA 3, OA 28, LA 4	384 mg GAE/100 g	46.0	Coimbra and Jorge, 2012
<i>S. romanzoffiana</i>		Bis-stilbene: syagrusin; bis-stilbenes: scirpusins E, B, A; stilbenoids: syagrusin A, scirpusin C, scirpusin D, 5-hydroxyaiphanol		Chang and Lee, 2014
<i>S. romanzoffiana</i>	CyA 6, CA 6, LaA 37, MA 11, PA 8, SA 3, OA 24, LA 5			Moreira et al., 2013
<i>S. romanzoffiana</i>	CyA 13, CA 10, LaA 43, MA 9, PA 6, SA 3, OA 14, LA 2		59.0	Guerin et al., 2020
<i>S. romanzoffiana</i>	CyA 9, CA 7, LaA 37, MA 10, PA 8, SA 2, OA 21, LA 5		43.0	Tavares et al., 2021
<i>S. romanzoffiana</i>	CA 6, LaA 24, MA 14, PA 13, SA 10, OA 28, LA 5		-	Rodrigues et al., 2022

#### Subfamily Coryphoideae

##### Tribe Caryoteae

<i>Arenga engleri</i>	CyA 7, CA 6, LaA 44, MA 10, PA 10, SA 3, OA 12, LA 9		6.7	Guerin et al., 2020
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##### Tribe Phoeniceae

<i>Phoenix canariensis</i>	LaA 3-10, MA 2-8, PA 10-11, SA 2, OA 47-60, LA 19-25		10-15	Nehdi et al., 2011
<i>P. canariensis</i>	CyA 1, CA 1, LaA 33, MA 12, PA 8, SA 2, OA 33, LA 11		8.7	Guerin et al., 2020
<i>P. canariensis</i> var. <i>red</i>		Caf 1; Cat 36; <i>m</i> Cou 10; <i>p</i> Cou 1; Epi 11; Gal 29; Isoq 15; Rut 3 mg/100 g dw	0.3	Turki et al., 2020
<i>P. canariensis</i> var. <i>yellow</i>		Cat 8; <i>m</i> Cou 1; Epi 56; Gal 42; Isoq 90; Rut 17 mg/100 g dw	0.8	Turki et al., 2020
<i>P. canariensis</i>	CA 1, LaA 25-30, MA 11-12, PA 9, SA 3, OA 37-42, LA 8	Aca 0-1; Caf 1-101; CiA 12-36; Cir 1; <i>o</i> Cou 11-12; CIA TPC: 91-403 mg/100 g 0-100; Fer 6-11; Gal 20-35; Hyp 0-1; Nar 0-2; Pt 0-82; Rut 1; Syr 4-11	9.8	Hamza et al., 2021
<i>Phoenix dactylifera</i> var. <i>Deglet Nour</i>		Caf 1; Gal 1; HyT 2; Olr 1; Pt 1; Tyr 1 mg/100 g		TPC: 52 mg CAE/100 g Besbes et al. 2004a
<i>Phoenix dactylifera</i> var. <i>Deglet Nour</i>	LaA 18, MA 10, PA 11, SA 6, OA 41, LA 12, ALA 2		10.2	Besbes et al. 2004b
<i>Phoenix dactylifera</i> var. <i>Deglet Nour</i>		Cat 17; Epi 10; Pt 1; PA2 2; PB1 50; PB2 58 mg/100 g		Sirisena et al., 2017
<i>P. dactylifera</i> var. <i>Deglet Nour</i>	LaA 17, MA 11, PA 11, SA 5, OA 45, LA 9		8.6	García González et al., 2019
<i>P. dactylifera</i> var. <i>Deglet Nour</i>	LaA 22, MA 9, PA 9, SA 4, OA 46, LA 7	Caf 1; Cat 24; Fer 1; HyTy 1; Lut 3; LutGlyc 1; Olr 1; Tyr 2; Van 15; VanA 4 mg/100 g	4.9	Harkat et al., 2022
<i>P. dactylifera</i> var. <i>Deglet Nour</i>	LaA 16, MA 9, PA 11, SA 5, OA 43, LA 14, ALA 2	Caf 0.1; Cat 0.5; Gal 0.5; Ru 0.1; Syr 0.2 mg/100 g	9.2	Al-Juhaimi et al., 2018
<i>P. dactylifera</i> var. <i>Medjool</i>	LaA 20, MA 12, PA 10, SA 3, OA 45, LA 9		5.6	TFC 2 g RE/100 g TPC 3 g GAE/100 g Bouhlali et al., 2017
<i>P. dactylifera</i> var. <i>Medjool</i>	LaA 20, MA 10, PA 11, SA 3, OA 46, LA 8, ALA 1	Caf 0.2; Cat 0.6; Gal 0.5; Ru 0.1; Syr 0.2 mg/100 g	5.8	Al Juhaimi et al., 2018
<i>P. dactylifera</i> var. <i>Medjool</i>	LaA 17, MA 10, PA 11, SA 5, OA 47, LA 9		5.4	García González et al., 2019
<i>P. dactylifera</i>		CafH, Cat, Hcaf, Epi, Isor, <i>p</i> Cou, PraCdi		~7000-8500 mg GAE/100 g John and Shahidi, 2019

<i>P. dactylifera</i>	LaA 21, MA 12, PA 10, SA 4, OA 42, LA 9		10.3	Guerin et al., 2020	
<i>Phoenix reclinata</i>	CyA 1, CA 1, LaA 29, MA 14, PA 9, SA 1, OA 34, LA 12 mol%		-	Litchfield, 1970	
<i>P. reclinata</i>	LaA 22, MA 11, PA 10, SA 2, OA 35, LA 20		7.8	Guerin et al., 2020	
<b>Tribe Sabaleae</b>					
<i>Sabal berrnudana</i>	LaA 11, MA 8, PA 12, SA 2, OA 40, LA 25		8.3	Guerin et al., 2020	
<i>Sabal domingensis</i>	LaA 13, MA 13, PA 11, SA 2, OA 43, LA 17		11.0	Guerin et al., 2020	
<i>Sabal minor</i>	CyA 1, CA 1, LaA 22, MA 6, PA 7, SA 2, OA 40, LA 19		5.0	Guerin et al., 2020	
<i>S. palmetto</i>	CyA 1, CA 1, LaA 22, MA 10, PA 9, SA 1, OA 31, LA 26 mol%		5.6	Litchfield, 1970	
<i>S. palmetto</i>	LaA 16, MA 10, PA 7, SA 5, OA 46, LA 15		8.0	Opute, 1979	
<i>S. palmetto</i>		<i>bis-O-[(1-4') → (1-6'')]-α-hydroxyphloretin-2'-O-β-glucoside, (-)-Epi, (-)-Epia, pHBA, Pt, MeGal</i>		Bar, 2014	
<i>S. palmetto</i>	CY 1, CA 1, LaA 21, MA 10, PA 8, SA 2, OA 40, LA 15		9.8	Guerin et al., 2020	
<i>S. palmetto</i>		Caf 2, Cat 4, CIA 7, Gal 1, pHBA 1, Pt 1.1, Syr 7, 142 mg/100 g	TFC: 11-207 mg CE/100 g DW TPA: 25-840 mg GAE/100 g DW	Barakat et al., 2020	
<b>Tribe Trachycarpeae</b>					
<i>Chamaerops humilis</i>	CyA 3, CA 4, LaA 27, MA 10, PA 10, SA 2, OA 31, LA 14		8.7	Litchfield, 1970	
<i>Chamaerops humilis</i> var. <i>humilis</i>	LaA 13, MA 6, PA 12, SA 3, OA 44, LA 20		9.1	9.9	Mokbli et al., 2018
<i>C. humilis</i> var. <i>argentea</i>	LaA 21, MA 7, PA 10, SA 4, OA 39, LA 15		-	9.8	Mokbli et al., 2018

<i>Chamaerops humilis</i>	CY 3, CA 3, LaA 28, MA 9, PA 9, SA 3, OA 29, LA 15	10.4	Guerin et al., 2020
<i>Livistona chinensis</i>	CyA 1, CA 1, LaA 22, MA 9, PA 14, SA 3, OA 29, LA 22 mol%	4.7	Litchfield, 1970
<i>L. chinensis</i>	LaA 15, MA 6, PA 14, SA 2, OA 27, LA 34, ALA 1	2.9	Guerin et al., 2020
<i>Livistona saribus</i>	CyA 1, CA 1, LaA 23, MA 10, PA 12, SA 3, OA 31, LA 19	4.0	Guerin et al., 2020
<i>Trachycarpus fortunei</i>	LaA 9, MA 12, PA 8, SA 2, OA 32, LA 35	4.1	Guerin et al., 2020
<i>Washingtonia robusta</i>	CyA 1, CA 1, LaA 18, MA 13, PA 10, SA 2, OA 38, LA 19 mol%	10.9	Litchfield, 1970
<i>W. robusta</i>	CyA 1, CA 1, LaA 23, MA 14, PA 8, SA 2, OA 36, LA 15	13.2	Guerin et al., 2020

**Abbreviations for fatty acids:** CO: caproic acid, CyA: caprylic acid, CA: capric acid, LaA: lauric acid, MA: miristic acid, PA: palmitic acid, SA: stearic acid, OA: oleic acid, LA: linoleic acid, ALA:  $\alpha$ -linolenic acid

**Abbreviations for phenolics:** Aca: acacetin; 4OCaf: 4-O-Caffeoylquinic acid; CAE: caffeic acid equivalents; Hcaf: hydrocaffeic acid; Caf: caffeic acid; CafH: caffeoyl hexoside; Cat: catechin; CE: catechin equivalents; CiA: cinnamic acid; Cir: cirsilinoleol; CIA: chlorogenic acid; *m*Cou: *m*-coumaric acid; *p*Cou: *p*-coumaric acid; *o*Cou: *o*-coumaric acid; DW: dry weight; Epi: epicatechin; Epia: epiafzelechin; Fer: ferulic acid; FW: fresh weight; Gal: gallic acid; GAE: gallic acid equivalents; *p*HBA: *p*-hydroxybenzoic acid; Hyp: hyperoxide; HyTyr: Hydroxytyrosol; Isoq: isoquercitrin; Isor: isorhamnetin; Lut: luteolin; LutGlyc: Luteolin-4-*O*-glucoside; MeGal: methyl gallate; Nar: naringenin; Olr: oleorupin; PA2: Procyanidin A2; PB1: Procyanidin B1; PB2: Procyanidin B2; PraCdi: proanthocyanidin dimer isomers; Pt: protocatechuic acid; RE: rutin equivalents; Rut: rutin; Sal: salicylic acid; Syr: syringic acid; TFC: total flavonoids content; TPC: total phenolics content; Tyr: tyrosol; Van: vanillin; VanA: vanillic acid

<sup>a</sup>Significant figures without decimals

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