



**Figure S1.** The Moroccan Argan tree regions (distribution based on [1]).

**Table S1** Percentages of total fatty acids in Argan oil according to different research studies. NA: not applicable.

Extraction technique	Origin of oil	Fatty acids					References
		Oleic	Palmitic	Linoleic	Stearic	Linolenic	
		C18:1	C16:0	C18:2	C18:0	C18:3	
Traditional	NA	43.0 - 49.1	11.5 - 15.0	29.3 - 36.0	4.3-7.2	≤0.3	[85]
	Agadir	44.9 ± 0.5	12.7 ± 0.4	30.5 ± 0.7	34.1 ± 0.6	0.13 ± 0.13	
	Ait-Baha	46.8 ± 0.5	14.1 ± 0.4	33.1 ± 0.5	6.8 ± 0.3	0.29 ± 0.04	
Mechanical	Ait-Baha	43.9 ± 0.5	14.1 ± 0.4	30.3 ± 0.8	4.6 ± 0.2	0.11 ± 0.03	[20]
	Taroudant	48.6 ± 0.5	14.6 ± 0.3	35.4 ± 0.6	5.6 ± 0.3	0.26 ± 0.02	
	Tiznit	47.3 ± 0.7	13.8 ± 0.4	34.1 ± 0.6	6.9 ± 0.3	0.25 ± 0.04	
Traditional	NA	45.0 - 50.0	11.8 - 13.5	29.1 - 34.1	5.2 - 6.9	0.03 - 0.1	[86]
Traditional	Tindouf	45.1	2.0	35.9	6.2	Traces	[6]
NA	Taroudant	47.2 ± 1.5	15.4 ± 0.7	30.3 ± 1.5	5.9 ± 0.5	NA	[87]
Mechanical	Ait Baha,	48	13.0	32.0	5.0	NA	[71]
Traditional	Tidzi, Tiout	47	13.0	33.0	5.0	NA	
Mechanical	Agadir	46.8 ± 0.5	12.8 ± 0.3	33.8 ± 0.6	4.9 ± 0.2	0.2 ± 0.05	[75]
EVAO regulation limit values		43.0 - 49.0	11.5 - 15.0	29.3 - 36.0	4.3 - 7.2	≤0.2	[46]

**Table S2** Metal composition of Argan Oils determined by ICP-AES. BQL: Below Quantification Limit, NA: not applicable.

Metal content (mg/kg)								Origins	Extraction methods	References
Ca	Co	Cr	Fe	K	Mg	Cd	Zn			
11.70 ± 0.03	0.550 ± 0.006	0.015 ± 0.003	NA	0.620 ± 0.007	5.95 ± 0.06	0.100 ± 0.003	0.650 ± 0.003	Agadir	Mechanical extraction	[44]
								Tarouda		
11.10 ± 0.03	0.390 ± 0.003	0.011 ± 0.003	NA	1.110 ± 0.004	7.62 ± 0.03	0.170 ± 0.003	0.400 ± 0.003	nt		
								Essaouir		
8.00 ± 0.01	0.410 ± 0.003	0.024 ± 0.003	NA	0.420 ± 0.008	4.33 ± 0.06	0.14 ± 0.01	0.530 ± 0.003	a		
25.0 - 65.5	0.1 – 0.5	1.0 – 3.0	3.0 ± 1.0	8.6 - 11.7	2.2 – 18.0	<0.26	<0.23	Morocco	Traditional extraction	[46]
10.0 ± 0.1	NA	BQL	0.46 ± 0.01	0.51 ± 0.01	2.43 ± 0.03	0.11 ± 0.01	0.036 ± 0.010	Agadir	Traditional extraction	[45]
								Tarouda		
9.8 ± 0.1	NA	BQL	0.18 ± 0.01	0.43 ± 0.01	6.32 ± 0.05	0.13 ± 0.01	0.033 ± 0.010	nt		
								Essaouir		
6.7 ± 0.1	NA	BQL	0.32 ± 0.01	0.32 ± 0.01	2.82 ± 0.02	0.12 ± 0.01	0.043 ± 0.010	a		
7.4 ± 0.9	NA	BQL	0.67 ± 0.05	1.11 ± 0.01	2.28 ± 0.23	BQL	BQL	Tiznit	Traditional extraction	[88]