

## SUPPLEMENTARY DATA:

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### **Section A:**

### **Fatty acid composition of selected plant based oils**

The fatty acid composition of these natural oils is presented in Table 1A where the table was compiled from information obtained from different researched papers that focused on providing fatty acid profiles of natural oils.

**Table 1A.** Fatty acid composition of selected plant based oils (34–36).

Fatty acid (% $\pm$ SD)	Argan oil	Avocado oil	Coconut oil	Macadamia oil	Olive oil
Lauric acid	Not detected	Not detected	<b>66.94 <math>\pm</math> 4.11</b>	Not detected	Not detected
Myristic acid	0.12 $\pm$ 0.01	0.01 $\pm$ 0.008	<b>18.81 <math>\pm</math> 0.98</b>	0.91 $\pm$ 0.17	Not detected
Palmitic acid	11.80 $\pm$ 0.53	<b>14.21 <math>\pm</math> 1.02</b>	6.54 $\pm$ 1.20	6.84 $\pm$ 1.87	0.73 $\pm$ 0.05
Palmitoleic acid	0.18 $\pm$ 0.02	7.06 $\pm$ 0.79	Not detected	<b>9.68 <math>\pm</math> 0.90</b>	2.04 $\pm$ 0.03
Stearic acid	<b>6.00 <math>\pm</math> 0.05</b>	2.15 $\pm$ 0.07	2.01 $\pm$ 0.12	3.39 $\pm$ 0.96	2.83 $\pm$ 0.01
Oleic acid	45.90 $\pm$ 1.84	59.46 $\pm$ 3.88	4.75 $\pm$ 0.1	50.65 $\pm$ 8.05	<b>72.79 <math>\pm</math> 0.21</b>
Linoleic acid	<b>34.10 <math>\pm</math> 1.08</b>	14.66 $\pm$ 1.20	0.82 $\pm$ 0.32	8.63 $\pm$ 1.77	13.20 $\pm$ 0.03
Linolenic acid	0.13 $\pm$ 0.01	1.3 $\pm$ 0.15	Not detected	<b>14.59 <math>\pm</math> 1.20</b>	0.92 $\pm$ 0.06
SFAs*	17.58 $\pm$ 0.63	16.93 $\pm$ 1.09	<b>94.40 <math>\pm</math> 5.08</b>	14.56 $\pm$ 2.38	11.60 $\pm$ 0.33
MUFAs*	46.08 $\pm$ 1.82	67.11 $\pm$ 1.77	4.78 $\pm$ 0.17	62.22 $\pm$ 9.19	<b>73.52 <math>\pm</math> 0.21</b>
PUFAs*	<b>33.63 <math>\pm</math> 1.25</b>	15.96 $\pm$ 1.15	0.082 $\pm$ 0.32	23.22 $\pm$ 1.62	14.13 $\pm$ 0.10
UFAs/SFAs	3.85	4.90	0.059	<b>5.86</b>	4.97

\* Monounsaturated Fatty Acids (MUFAs), Polyunsaturated Fatty Acids (PUFAs), Unsaturated Fatty Acids (UFAs), Saturated Fatty Acids (SFAs)

## References

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### **Section B:**

### **SEDDS formulations selected from the various self-emulsification regions**

A possible 5 formulations were prepared from each individual oil's self-emulsification region (Table 1B), i.e. two points at the top, two at the bottom, and one in the centre of the identified region on the pseudo-ternary phase diagrams (Figure 1 in paper). The self-emulsification area on the pseudo-ternary phase diagram of the coconut oil preparations rendered a markedly smaller range comparatively. Nonetheless, 5 possible formulations were selected from this region as similarly as possible to the selection method utilized for the other oils.

**Table 1B.** SEDDS formulations selected from the self-emulsification region of each individual oil where their respective abbreviations as well as the ratio of excipients are indicated. Formulations that depicted phase separation after 24 h, and thus considered inappropriate drug delivery systems, are highlighted and in bold. These formulations in bold were excluded from further analysis.

Oil Type Included in SEDDS	Formulation Abbreviation	Excipient Ratio (Oil: Surfactant Phase: Water)
Argan Oil (ARG)	ARG1	7 : 5 : 7
	<b>ARG2</b>	<b>7.4 : 5 : 5</b>
	ARG3	6 : 4 : 6
	<b>ARG4</b>	<b>7 : 3 : 3</b>
	ARG5	4.4 : 3 : 7
Avocado Oil (AVO)	<b>AVO1</b>	<b>7 : 5 : 5</b>
	AVO2	6.6 : 5 : 5
	AVO3	6 : 4 : 6
	AVO4	3.4 : 3 : 7
	AVO5	7 : 3 : 7
Coconut Oil (CCT)	<b>CCT1</b>	<b>9 : 3 : 7</b>
	<b>CCT2</b>	<b>9 : 2 : 8</b>
	<b>CCT3</b>	<b>8 : 2 : 8</b>
	<b>CCT4</b>	<b>9 : 1 : 9</b>
	<b>CCT5</b>	<b>6.3 : 1 : 9</b>
Macadamia Oil (MAC)	MAC1	7 : 5 : 5
	MAC2	6.6 : 5 : 5
	MAC3	6 : 4 : 6
	<b>MAC4</b>	<b>7 : 3 : 7</b>
	MAC5	4.4 : 3 : 7
Olive Oil (OLV)	OLV1	7 : 5 : 5
	OLV2	6.7 : 5 : 5
	OLV3	6 : 4 : 6
	<b>OLV4</b>	<b>4.4 : 3 : 7</b>
	OLV5	4.4 : 3 : 7