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APPENDIX

Table A Data from chromatogram of palm oil methyl ester

Peak No.	Retention Time	Area	Height	Compound Name
1	3.248	4486.6	1742.4	FAME C8:0
2	4.387	4880.2	1513.3	FAME C10:0
3	6.995	62346.9	11545.5	FAME C12:0
4	12.932	163370.2	14024.3	FAME C14:0
5	25.558	7715458.6	419514.2	FAME C16:0
6	26.744	28488.6	2137.4	FAME C16:1
7	36.903	684388.9	38944.7	FAME C18:0
8	38.095	9217203.1	588862.8	FAME C18:1
9	40.143	2152667.8	227654.9	FAME C18:2
10	43.100	29651.3	3620.3	FAME C20:0
11	46.410	58547.4	6885.7	FAME C18:3
12	54.708	10420.3	1431.0	FAME C22:0

Note: FAME=Fatty Acid Methyl Ester

Table B Quantitative analysis from chromatogram of palm oil methyl ester

Compound Name	Molecular Weight, Mw (g/mol)	Concentration, C (% Area)	Mw*C/100
FAME C8:0	158	0.0223	0.035234
FAME C10:0	186	0.0242	0.045012
FAME C12:0	214	0.3097	0.662758
FAME C14:0	242	0.8115	1.96383
FAME C16:0	270	38.3245	103.4762
FAME C16:1	268	0.1415	0.37922
FAME C18:0	298	3.3995	10.13051
FAME C18:1	296	45.784	135.5206
FAME C18:2	294	10.6928	31.43683
FAME C20:0	326	0.1473	0.480198
FAME C18:3	292	0.2908	0.849136
FAME C22:0	354	0.0518	0.183372
		$\sum$ = 100.0	$\sum$ = 285.1629

From Table B, the average molecular weight of palm oil methyl ester is 285.1629 g/mol. To determine the palm oil molecular weight (Mw), the calculation was shown as follow,

Assume, palm oil has 100% of triglyceride.

*Mw of palm oil = [(Mw of palm oil methyl ester)*3] – Mw of four hydrogen atoms*

*= (285.1629*3) – 4*

= 851.4887 g/mol

Therefore, the molecular weight of palm oil used in this research is approximately 851 g/mol.

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