**Supplemental file 1: Pharmacokinetic parameters of eicosapentaenoic acid and docosahexaenoic acid after monoacylglycerol and ethyl ester supplementation**

| PK parameters | Concentration EPA | Concentration DHA | % area EPA | % area DHA |
|---------------|------------------|------------------|------------|------------|
|               | Mean ± SD | P- value | Mean ± SD | P- value | Mean ± SD | P- value | Mean ± SD | P- value |
| Cmax          |           |          |            |          |           |          |           |          |
| - EE          | 1.99 ± 1.20 | <0.0001  | 1.6 ± 0.9  | <0.0001  | 0.65 ± 0.34 | <0.0001 | 0.28 ± 0.16 | <0.0001 |
| - MAG         | 5.92 ± 2.47 |          | 4.1 ± 1.5  |          | 1.98 ± 0.76 |          | 1.30 ± 0.67 |          |
| Conc T=24h    |           |          |            |          |           |          |           |          |
| - EE          | 0.96 ± 0.73 | <0.0001  | 0.4 ± 0.8  | 0.6614   | 0.36 ± 0.17 | 0.0034  | 0.05 ± 0.25 | 0.0136  |
| - MAG         | 1.98 ± 0.71 | <0.0001  | 0.5 ± 0.8  |          | 0.84 ± 0.23 |          | 0.20 ± 0.18 |          |
| AUC 0-5h      |           |          |            |          |           |          |           |          |
| - EE          | 1.4 ± 1.1   | <0.0001  | 1.9 ± 1.5  | <0.0001  | 0.50 ± 0.28 | <0.0001 | 0.40 ± 0.41 | 0.001   |
| - MAG         | 7.3 ± 2.5   | <0.0001  | 5.7 ± 2.0  |          | 2.51 ± 0.87 |          | 1.91 ± 0.93 |          |
| AUC 0-24h     |           |          |            |          |           |          |           |          |
| - EE          | 24.5 ± 6.9  | <0.0001  | 13.8 ± 7.11| <0.0001  | 8.01 ± 1.62 | <0.0001 | 1.43 ± 1.26 | <0.0001 |
| - MAG         | 62.4 ± 9.7  | <0.0001  | 27.2 ± 8.8 | <0.0001  | 22.89 ± 2.84 | <0.0001 | 8.32 ± 2.14 | <0.0001 |

PK = Pharmacokinetic, EPA = Eicosapentaenoic acid, DHA = Docosahexaenoic acid, EE = Ethyl ester, MAG = Monoacylglycerol, SD = standard deviation, Cmax = maximum concentration, Conc T=24h = Concentration of FAs at 24h post supplementation, AUC 0-5h = Area under the curve from time 0 to 5h post supplementation, AUC 0-24h = Area under the curve from time 0 to 24h post supplementation.
**Supplemental file 2: Pharmacokinetic parameters of eicosapentaenoic acid + docosahexaenoic acid in males and females after monoacylglycerol and ethyl ester supplementation.**

| Pharmacokinetic parameters | EE   | MAG    | P- value |
|----------------------------|------|--------|----------|
| Cmax                       |      |        |          |
| - Males                    | 2.55 ± 1.97 | 9.12 ± 4.83 | 0.0295 |
| - Females                  | 4.45 ± 1.60 | 10.31 ± 3.20 | 0.5268 |
| Concentration T=24h        |      |        |          |
| - Males                    | 0.96 ± 1.07 | 2.52 ± 1.43 | 0.2080 |
| - Females                  | 1.70 ± 1.46 | 2.38 ± 0.97 | 0.0567 |
| AUC 0-5h                   |      |        |          |
| - Males                    | 1.8 ± 1.8 | 11.6 ± 4.9 | 0.0111 |
| - Females                  | 4.8 ± 2.8 | 14.4 ± 3.4 | 0.1547 |
| AUC 0-24h                  |      |        |          |
| - Males                    | 27.4 ± 11.9 | 90.1 ± 20.7 | 0.0006 |
| - Females                  | 49.6 ± 11.8 | 89.1 ± 13.2 | 0.8941 |

EE = Ethyl ester, MAG = Monoacylglycerol, SD = standard deviation, Cmax = maximum concentration, Concentration T=24h = Concentration of FAs at 24h post supplementation, AUC 0-5h = Area under the curve from time 0 to 5h post supplementation, AUC 0-24h = Area under the curve from time 0 to 24h post supplementation.