

Table S1. Concentration levels of total fatty acids (free and triglycerides- and phospholipids-bound) expressed as % of total identified FA, measured in human preterm milk at W2, W3, W4 of lactation and provided to newborns with fast or slow growth.

Fatty acids (%)	Week 2		Week 3		Week 4		Week 2 through eek 4	
	Slow growth (n=11)	Fast growth (n= 8)	Slow growth (n=14)	Fast growth (n=10)	Slow growth (n=11)	Fast growth (n=11)	Slow growth (n=38)	Fast growth (n=29)
8:0	0.179 [0.159-0.222]	0.205 [0.171-0.246]	0.165 [0.147-0.224]	0.209 [0.178-0.260]	0.197 [0.129-0.208]	0.184 [0.138-0.214]	0.176 [0.151-0.211]	0.198 [0.157-0.236]
10:0	1.726 [1.528-1.880]	1.730 [1.549-2.278]	1.633 [1.403-2.045]	1.849 [1.741-2.112]	1.643 [1.542-1.926]	1.713 [1.582-1.919]	1.654 [1.512-1.911]	1.791 [1.591-2.082]
12:0	6.636 [5.906-7.037]	7.651 [6.009-8.868]	6.391 [5.059-7.092]	7.181 [6.404-7.991]	6.077 [5.821-6.870]	6.832 [5.474-7.923]	6.203 [5.817-6.866]	7.100 [6.069-8.127] ^a
14:0	7.050 [6.936-8.053]	8.181 [6.816-9.890]	6.999 [5.797-8.129]	8.073 [7.160-9.573] ^a	6.966 [5.617-8.021]	8.039 [5.617-9.939]	7.049 [6.053-8.045]	8.039 [6.909-9.629] ^a
16:0	22.76 [20.95-25.79]	21.41 [20.04-24.37]	23.19 [18.69-24.44]	24.04 [21.44-25.57]	23.49 [18.00-24.11]	23.02 [20.81-24.11]	23.19 [19.48-24.84]	23.15 [21.21-24.84]
18:0	6.709 [6.154-7.346]	6.216 [5.893-6.787]	7.076 [6.241-7.418]	7.114 [5.881-7.685]	6.809 [6.439-8.099]	7.049 [5.594-7.823]	6.872 [6.313-7.556]	6.934 [5.883-7.435]
20:0	0.195 [0.190-0.203]	0.192 [0.184-0.207]	0.195 [0.165-0.220]	0.198 [0.191-0.231]	0.204 [0.157-0.214]	0.195 [0.168-0.204]	0.195 [0.170-0.211]	0.196 [0.178-0.211]
SAT	46.06 [42.64-49.30]	48.32 [44.01-49.44]	45.74 [38.73-46.91]	48.08 [46.32-52.67] ^a	45.27 [39.07-48.13]	47.81 [39.71-49.57]	45.74 [41.97-48.51]	48.08 [45.81-49.54] ^a
MCSAT	8.445 [7.609-8.816]	9.527 [7.730-11.390]	8.116 [6.715-9.235]	9.480 [8.377-10.200]	7.817 [7.246-9.011]	8.844 [7.212-9.916]	8.050 [7.506-8.871]	8.976 [7.772-10.210] ^a
16:1 _{n-9}	0.476 [0.436-0.530]	0.456 [0.401-0.520]	0.476 [0.406-0.498]	0.468 [0.378-0.495]	0.499 [0.413-0.561]	0.425 [0.392-0.522]	0.479 [0.419-0.530]	0.4573 [0.393-0.514]
16:1 _{n-7}	2.335 [2.027-2.745]	2.220 [2.063-2.671]	2.269 [2.003-2.644]	2.314 [1.990-3.096]	2.332 [1.956-2.796]	2.447 [2.178-2.662]	2.331 [2.030-2.737]	2.239 [2.098-2.698]
18:1 _{n-9}	33.56 [32.24-35.79]	33.45 [29.86-35.71]	35.67 [32.06-39.70]	32.07 [30.50-34.69] ^a	35.80 [32.27-37.88]	33.20 [32.27-35.80]	34.79 [32.25-37.88]	32.82 [31.02-34.78] ^a
18:1 _{n-7}	1.673 [1.446-2.003]	1.666 [1.429-2.335]	1.686 [1.568-1.960]	1.719 [1.571-2.004]	1.919 [1.640-1.994]	1.898 [1.655-1.994]	1.720 [1.495-1.993]	1.818 [1.556-2.007]
20:1 _{n-9}	0.561 [0.527-0.603]	0.566 [0.471-0.698]	0.542 [0.503-0.594]	0.534 [0.446-0.620]	0.481 [0.464-0.521]	0.514 [0.463-0.533]	0.532 [0.483-0.567]	0.520 [0.462-0.597]
MUFA	39.58 [37.59-42.75]	39.44 [35.24-41.06]	41.79 [37.47-44.83]	39.12 [36.48-40.80] ^a	41.35 [38.07-42.70]	39.58 [38.07-42.56]	41.10 [37.77-44.35]	39.58 [36.87-40.82] ^a
MUFA/SFA	0.87 [0.78-0.97]	0.81 [0.71-0.98] ^a	0.90 [0.78-1.17]	0.82 [0.70-0.87]	0.93 [0.82-1.09]	0.83 [0.77-0.96] ^a	0.91 [0.79-1.04]	0.82 [0.74-0.91] ^a
18:1 _{n-9} et n-7	35.12 [34.27-38.13]	35.30 [31.62-37.18]	37.48 [33.70-41.08]	33.88 [32.17-36.37] ^a	37.59 [34.04-39.57]	35.25 [34.25-38.36]	36.67 [34.09-39.79]	34.78 [32.76-36.61] ^a
cis 18:2 _{n-6} (LA)	9.545 [8.856-12.62]	8.958 [7.922-11.84]	9.695 [8.587-12.37]	8.960 [7.322-11.61]	10.54 [8.469-13.14]	8.787 [8.468-12.22]	9.651 [8.754-12.41]	8.881 [7.859-11.64]
cis 18:3 _{n-6} (GLNA)	0.100 [0.082-0.109]	0.098 [0.066-0.114]	0.115 [0.083-0.137]	0.096 [0.084-0.134]	0.118 [0.091-0.133]	0.100 [0.080-0.129]	0.107 [0.086-0.133]	0.099 [0.078-0.125]
cis 20:2 _{n-6}	0.323 [0.279-0.371]	0.347 [0.297-0.402]	0.294 [0.251-0.317]	0.279 [0.223-0.348]	0.263 [0.251-0.302]	0.268 [0.238-0.316]	0.295 [0.252-0.332]	0.295 [0.235-0.343]
cis 20:3 _{n-6}	0.373 [0.322-0.471]	0.425 [0.349-0.515]	0.344 [0.299-0.412]	0.409 [0.330-0.453]	0.361 [0.315-0.435]	0.352 [0.277-0.435]	0.349 [0.317-0.443]	0.404 [0.317-0.456]
cis 20:4 _{n-6} (AA)	0.506 [0.499-0.632]	0.502 [0.448-0.698]	0.484 [0.412-0.587]	0.479 [0.421-0.574]	0.467 [0.383-0.569]	0.381 [0.365-0.590]	0.502 [0.425-0.580]	0.467 [0.379-0.591]
cis 22:2 _{n-6}	0.056 [0.047-0.070]	0.064 [0.057-0.075]	0.048 [0.038-0.053]	0.045 [0.041-0.055]	0.041 [0.037-0.049]	0.039 [0.034-0.053]	0.048 [0.040-0.061]	0.048 [0.039-0.060]
cis 22:4 _{n-6}	0.128 [0.118-0.164]	0.139 [0.107-0.159]	0.107 [0.092-0.125]	0.112 [0.097-0.129]	0.100 [0.081-0.125]	0.086 [0.080-0.110]	0.113 [0.091-0.135]	0.108 [0.086-0.134]
Total n-6 PUFA	10.94 [10.37-14.35]	10.72 [9.60-13.47]	11.39 [9.83-13.27]	10.30 [8.83-13.27]	12.02 [10.12-14.82]	10.18 [9.83-14.10]	11.44 [10.20-14.14]	10.38 [9.434-13.32]
cis 18:3 _{n-3} (ALNA)	0.796 [0.597-0.968]	0.969 [0.745-1.249]	0.852 [0.585-1.181]	0.893 [0.537-1.197]	0.835 [0.694-1.248]	1.011 [0.741-1.506]	0.831 [0.609-1.140]	0.947 [0.720-1.285]
cis 20:5 _{n-3} (EPA)	0.063 [0.028-0.075]	0.075 [0.061-0.123]	0.059 [0.041-0.086]	0.071 [0.057-0.085]	0.052 [0.043-0.069]	0.083 [0.069-0.095] ^a	0.058 [0.042-0.077]	0.076 [0.061-0.092] ^b
cis 22:5 _{n-3} (DPA)	0.155 [0.120-0.161]	0.171 [0.136-0.212]	0.135 [0.112-0.187]	0.160 [0.139-0.177]	0.140 [0.097-0.172]	0.164 [0.140-0.1736]	0.141 [0.114-0.172]	0.164 [0.140-0.180] ^a
cis 22:6 _{n-3} (DHA)	0.367 [0.235-0.429]	0.397 [0.343-0.572]	0.325 [0.221-0.417]	0.385 [0.286-0.465]	0.317 [0.211-0.341]	0.371 [0.328-0.452] ^a	0.320 [0.220-0.390]	0.383 [0.316-0.477] ^a
Total n-3 PUFA	1.562 [1.393-1.894]	1.965 [1.847-2.144]	1.701 [1.336-2.149]	1.712 [1.262-2.236]	1.565 [1.479-1.836]	1.875 [1.674-2.449] ⁱ	1.598 [1.411-1.976]	1.881 [1.466-2.213] ^a
Total PUFA	12.83 [11.93-16.41]	12.65 [11.48-15.50]	13.15 [11.50-16.67]	11.81 [10.27-15.41]	13.50 [11.51-16.65]	12.09 [11.51-16.55]	12.96 [11.74-16.40]	12.29 [11.15-15.65]
Unsaturated/saturated fatty acid	1.17 [1.03-1.34]	1.07 [1.02-1.27]	1.18 [1.13-1.58]	1.08 [0.90-1.16]	1.21 [1.08-1.55]	1.09 [1.02-1.52] ^a	1.18 [1.06-1.38]	1.08 [1.02-1.18] ^a
PUFA/SFA	0.29 [0.26-0.33]	0.26 [0.24-0.32]	0.29 [0.23-0.39]	0.25 [0.19-0.33]	0.30 [0.24-0.43]	0.25 [0.22-0.42]	0.29 [0.24-0.38]	0.26 [0.22-0.32]
n-6/n-3 PUFA	7.10 [6.32-7.81]	5.81 [5.03-7.05]	6.22 [5.59-8.35]	6.29 [4.79-7.00]	7.66 [5.42-8.29]	5.56 [5.27-5.76] ⁱ	7.03 [5.83-8.23]	5.71 [5.04-6.87] ^b
LC-PUFA	2.194 [1.969-2.544]	2.511 [1.980-2.983]	2.052 [1.685-2.388]	2.196 [1.999-2.333]	1.951 [1.624-2.174]	2.046 [1.871-2.284]	2.088 [1.768-2.321]	2.129 [1.978-2.383]
Essential FA (LA+ALNA)	10.73 [9.42-13.83]	9.85 [8.87-13.02]	10.73 [9.39-13.83]	9.38 [8.24-13.02]	11.37 [8.96-14.44]	9.85 [8.96-13.73]	10.73 [9.46-13.81]	9.83 [8.79-13.18]
LA/ALA	10.86 [10.08-16.22]	10.49 [9.05-11.64]	11.45 [8.08-16.95]	10.30 [8.17-13.14]	10.81 [9.23-13.72]	8.99 [8.07-11.09] ⁱ	10.86 [9.30-15.66]	9.99 [8.35-11.69] ^a
AA/DHA	1.657 [1.220-2.491]	1.320 [1.013-1.633]	1.661 [1.144-2.134]	1.465 [1.048-1.737]	1.778 [1.426-2.235]	1.197 [0.804-1.689] ^a	1.679 [1.251-2.191]	1.307 [0.983-1.690] ^b
BCFA	30.87 [29.20-32.53]	30.75 [28.42-33.09]	29.21 [27.09-31.34]	32.25 [30.14-34.36]	29.55 [26.85-32.26]	30.70 [28.03-33.37] ⁱ	29.82 [28.65-30.99]	31.25 [29.99-32.51]

PUFA: Polyunsaturated fatty acid; AA: arachidonic acid; EPA: eicosapentaenoic acid; DHA: docosahexanoic acid; DGLA : dihomogamma-linolenic acid ; GLNA : gamma-linolenic acid ; LA: Linoleic acid; ALNA: alpha-Linolenic acid. SAT: saturated fatty acids; MCSAT: medium chain saturated fatty acids (C8:0 to C12:0); MUFA: monounsaturated fatty acid; LC-PUFA: Long-Chain PUFA (polyunsaturated fatty acid that contains at least 20 carbons); BCFA: branched-chain fatty acids (C14:0, C15:0; C17:0 and C16:0).

Values (expressed as % of total identified FA) are median and [25% and 75% percentile] and are given for fatty acids present at > 0.05% of total fatty acids in milk. Values of p-values (assessed by Mann Whitney *U* test) between fast and slow growth groups were reported with ^a or ^b significantly different at same stage of lactation, p<0.05 or p<0.01, respectively and *t*, a trend, 0.050<p<0.10. n: milk samplings at week 2, week 3 and week 4 of lactation. Fatty acids in bold and red font presented a corrected p-value <0.05, using the *post hoc* control of the type I error rate (False discovery Rate procedure), between the two infant groups on the total W2 to W4 lactation period.