

SDC2: Fatty acid composition of human milk and infant formulae.

*: Fatty acids in breast milk data have been computed from a comprehensive search of the original literature published from 2009 (see SDC1). For each fatty acid, when less than 10 surveys were found, the indicated values are the smallest (min) and the highest (max) reported mean. When 10 surveys or more were found (n≥10), the 10th and 90th percentile of means are given.

** : Fatty acids have been analyzed in infant formulae present on the market in 2013 and coming from different manufacturers and retailers worldwide.

Analyses have been carried out by a certified laboratory, using accredited methods.

ND: non quantifiable amount (<0,05%)

FATTY ACIDS (% of total fatty acids)		Breast milk		Infant formulae				
				Blend of plant oils			Blend of dairy lipids and plant oils	
				with palm oil		no palm oil		no palm oil
				with coconut oil	no coconut oil	with coconut oil	no coconut oil	
		<i>n</i>	Range	added ARA/DHA: <i>n</i> =4 / not added: <i>n</i> =2	added ARA/DHA: <i>n</i> =2 / not added: <i>n</i> =1	added ARA/DHA: <i>n</i> =2 / not added: <i>n</i> =1	added ARA/DHA: <i>n</i> =1 / not added: <i>n</i> =3	
SATURATED		9	33,8 - 46,9	41 - 50,3	31,5 - 35,6	33,2 - 34,3	35,1 - 38,0	
Butyric acid	C4:0			ND	ND	ND	0,6 - 0,7	
Caproic acid	C6:0	4	0,03 - 0,79	0,1	ND	ND - 0,1	0,6	
Caprylic acid	C8:0	10	0,08 - 0,61	1,0 - 1,5	ND	1,6 - 1,7	0,4	
Capric acid	C10:0	12	0,72 - 1,71	0,9 - 1,3	ND - 0,1	1,4 - 1,5	1,1 - 1,2	
Lauric acid	C12:0	18	2,31 - 6,74	7,8 - 11,5	0,1 - 0,2	12,0 - 12,6	1,3 - 1,6	
Myristic acid	C14:0	19	3,98 - 8,67	4,0 - 5,5	0,7 - 0,8	5,1 - 5,6	5,0 - 5,5	
Palmitic acid	C16:0	19	16,6 - 25	18,2 - 25,4	26,1 - 29,5	8,1 - 8,9	16,5 - 20,4	
Stearic acid	C18:0	19	3,39 - 6,89	3,5 - 4,0	3,3 - 4,1	2,6 - 3,5	5,4 - 6,1	
Arachidic acid	C20:0	15	0,13 - 0,83	0,3 - 0,4	0,4	0,3 - 0,4	0,3	
Lignoceric acid	C24:0	13	0,04 - 0,61	0,1	0,1	0,1 - 0,2	0,1	
MONOUNSATURATED		9	30,8 - 42,9	28,7 - 41,7	43,3 - 46,7	41,3 - 47,6	41,7 - 43,6	
Palmitoleic acid	C16:1 n-7	16	1,62 - 5,2	0,1 - 0,2	0,2 - 0,3	0,1 - 0,2	1,0 - 1,1	
Oleic acid	C18:1 n-9	19	26,5 - 35,6	28,4 - 40,8	42,3 - 45,5	40,9 - 47,1	39,1 - 41,2	
Nervonic acid	C24:1 n-9	11	0,03 - 1,21	ND - 0,1	0,1	ND - 0,1	0,1	
POLYUNSATURATED				16,4 - 20,4	20,4 - 21,0	18,0 - 23,8	19,7 - 19,5	
n-6 PUFA		12	11,6 - 26	13,6 - 18,5	17,3 - 18,2	15,7 - 21,9	16,1 - 16,5	
Linoleic acid	C18:2 n-6	19	10,1 - 24,3	13,3 - 18,5	16,8 - 17,8	15,2 - 21,5	15,6 - 16,3	
Gamma-linolenic acid	C18:3 n-6	13	0,06 - 0,23	ND	ND	ND	ND	
Arachidonic acid	C20:4 n-6	19	0,45 - 0,86	added: 0,2 - 0,6 / not added: ND	added: 0,3 - 0,4 / not added: ND	added: 0,4 / not added: ND	added: 0,3 / not added: 0,1	
Adrenic acid	C22:4 n-6	9	0,04 - 0,47	ND	ND	ND	ND	
n-3 PUFA		12	0,85 - 3,57	1,9 - 2,8	2,2 - 3,7	1,9 - 2,7	2,5 - 3,0	
Alpha-linolenic acid	C18:3 n-3	19	0,67 - 1,9	1,6 - 2,4	1,9 - 3,4	1,8 - 2,7	2,4 - 2,5	
Stearidonic acid	C18:4 n-3	4	0,23 - 0,68	ND	ND	ND	ND	
Eicosatrienoic acid	C20:3 n-3	9	0,05 - 0,4	ND	ND	ND	ND	
Eicosapentaenoic acid	C20:5 n-3	16	0,06 - 0,33	ND - 0,1	ND - 0,1	ND - 0,1	ND - 0,1	
Docosapentaenoic acid	C22:5 n-3	12	0,16 - 0,54	ND	ND	ND	ND - 0,1	
Docosahexaenoic acid	C22:6 n-3	18	0,09 - 1,03	added: 0,2 - 0,3 / not added: ND	added: 0,2 / not added: ND	added: 0,1 - 0,3 / not added: ND	added: 0,3 / not added: ND	
RATIO LA/ALA		5	3,45 - 11,9	5,5 - 10,6	4,9 - 9,4	7,5 - 11,9	6,2 - 6,7	
RATIO ARA/DHA *		4	1,47 - 3,43	1,0 - 2,0	1,5 - 2,0	1,3 - 4,0	1,0	

* when added ARA/DHA