

1 **Supplement Table 1.**
 2 **Plasma fatty acid composition of male and female rat fed LA+ALA diet and LA diet**
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Group	HM			HF			LM			LF								
Gender	Male			Female			Male			Female								
Diet	LA+ALA Diet						LA Diet											
Fatty Acids	% weight of Total Fatty Acid																	
10:0	0.14	±	0.02	0.10	±	0.01	^{b1}	0.10	±	0.01	0.14	±	0.03					
12:0	1.55	±	0.26	1.71	±	0.33		1.81	±	0.36	1.65	±	0.31					
14:0	1.81	±	0.22	2.21	±	0.32	^{a1}	2.12	±	0.28	2.11	±	0.29					
16:0	16.9	±	0.49	17.5	±	0.68		17.4	±	0.59	16.0	±	0.55					
18:0	12.6	±	0.45	14.2	±	0.77	^{a2}	12.1	±	0.34	15.1	±	0.61					
20:0	0.09	±	0.01	0.09	±	0.00		0.08	±	0.00	0.08	±	0.00					
24:0	0.20	±	0.02	0.16	±	0.01	^{b1}	0.16	±	0.01	0.16	±	0.01					
16:1n-7	3.48	±	0.19	3.76	±	0.20	^{a2}	3.74	±	0.17	3.13	±	0.16					
18:1n-9	13.3	±	1.54	16.2	±	2.13	^{a2}	15.5	±	1.24	16.3	±	1.67					
18:1n-7	3.12	±	0.16	2.51	±	0.14	^{b3}	3.69	±	0.18	2.66	±	0.15					
20:1n-9	0.17	±	0.01	0.16	±	0.01		0.22	±	0.01	0.19	±	0.01					
24:1n-9	0.19	±	0.02	0.12	±	0.01	^{b2}	0.15	±	0.01	0.13	±	0.01					
18:2n-6	12.4	±	0.41	11.9	±	0.37	^{b2}	9.71	±	0.33	9.59	±	0.42					
18:3n-6	0.18	±	0.01	0.21	±	0.01	^{a3}	0.18	±	0.01	0.22	±	0.02					
20:2n-6	0.15	±	0.01	0.14	±	0.02		0.13	±	0.01	0.11	±	0.01					
20:3n-6	1.00	±	0.04	0.69	±	0.03	^{b3}	0.76	±	0.05	0.39	±	0.02					
20:4n-6	21.9	±	1.12	17.2	±	1.17	^{b3}	24.1	±	1.06	22.8	±	1.10					
22:4n-6	0.20	±	0.01	0.21	±	0.02		0.55	±	0.04	0.60	±	0.03					
22:5n-6	0.16	±	0.01	0.19	±	0.01	^{a2}	2.73	±	0.06	4.36	±	0.15					
18:3n-3	0.58	±	0.05	0.71	±	0.05	^{a2}	0.07	±	0.02	0.07	±	0.02					
20:5n-3	0.71	±	0.04	0.78	±	0.06		0.02	±	0.00	0.02	±	0.01					
22:5n-3	0.41	±	0.01	0.41	±	0.01		0.04	±	0.00	0.03	±	0.00					
22:6n-3	4.52	±	0.14	5.18	±	0.29	^{a2}	0.37	±	0.01	0.54	±	0.03					
20:3n-9	0.24	±	0.01	0.14	±	0.01	^{b3}	0.42	±	0.02	0.23	±	0.01					
TFA (mg/mL)	3.54	±	0.13	3.69	±	0.19		4.47	±	0.24	3.93	±	0.24					
Summary																		
Σ Saturates	33.3	±	1.05	36.0	±	1.41	^{a2}	33.9	±	1.32	35.3	±	1.28					
Σ MUFA	20.3	±	1.62	22.7	±	2.22	^{a1}	23.3	±	1.28	22.4	±	1.74					
Σ n-6 PUFA	36.5	±	1.11	31.0	±	1.18	^{b3}	38.7	±	1.05	38.5	±	1.06					
Σ n-3 PUFA	6.27	±	0.12	7.13	±	0.29	^{a2}	0.55	±	0.03	0.72	±	0.03					
n-6/n-3 PUFA	5.82	±	0.14	4.35	±	0.06	^{b3}	71.6	±	3.00	53.8	±	2.01					
n-3%/HUFA	19.5	±	0.60	25.9	±	0.56	^{a3}	1.49	±	0.04	2.07	±	0.05					
AA/DHA	4.84	±	0.18	3.31	±	0.10	^{b3}	64.9	±	2.4	42.4	±	1.6					

4 Data were expressed in Mean ± SEM (n=6 with 8 measurements per animal); Significant difference was tested for
 5 genders, but not for diets; a-female greater; b-female lower; paired *t*-test with *P* < 0.05(1), 0.01 (2), 0.001 (3).