

**S1 File. Tables A1 to D4 showing ANOVA Type III summaries for serum fatty acids, log transformed fatty acids or fatty acid ratios for the categories age, sex and captivity status.**

**Table A1. Log of myristic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.05	1	0.05	1.50	0.23
Captivity status	0.002	1	0.002	0.05	0.83
Age	0.04	3	0.01	0.41	0.75
Sex : captivity status	0.03	1	0.03	0.95	0.33
Sex : age	0.07	3	0.02	0.61	0.61
Captivity status : age	0.04	1	0.04	1.10	0.30
Sex : captivity status : age	0.005	1	0.005	0.14	0.71
Error	2.35	66	0.04		

**Table A2. Palmitic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	87393.47	1	87393.47	1.13	0.29
Captivity status	262270.44	1	262270.44	3.39	0.07
Age	494513.62	3	164837.87	2.13	0.11
Sex : captivity status	96582.81	1	96582.81	1.25	0.27
Sex : age	236986.21	3	78995.40	1.02	0.39
Captivity status : age	26919.06	1	26919.06	0.35	0.56
Sex : captivity status : age	21182.95	1	21182.95	0.27	0.60
Error	4956155.34	64	77439.93		

**Table A3. Log of heptadecanoic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.003	1	0.003	0.14	0.71
Captivity status	0.64	1	0.64	27.19	<0.0005
Age	0.08	3	0.03	1.18	0.33
Sex : captivity status	0.04	1	0.04	1.68	0.20
Sex : age	0.03	3	0.009	0.40	0.76
Captivity status : age	0.02	1	0.02	1.003	0.32
Sex : captivity status : age	0.000	1	0.000	0.02	0.89
Error	1.55	66	0.023		

**Table A4. Stearic acid.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	267646.45	1	267646.45	1.25	0.27
Captivity status	25910.22	1	25910.23	0.12	0.73
Age	1113937.84	3	371312.61	1.73	0.17
Sex : captivity status	1091495.53	1	1091495.53	5.09	0.03
Sex : age	557534.62	3	185844.87	0.87	0.46
Captivity status : age	23763.73	1	23763.73	0.11	0.74
Sex : captivity status : age	253899.76	1	253899.76	1.18	0.28
Error	14164964.94	66	214620.68		

**Table A5. Nonadecanoic acid.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	6.100E-6	1	6.100E-6	0.02	0.90
Captivity status	0.001	1	0.001	3.15	0.08
Age	0.001	3	0.000	0.63	0.60
Sex : captivity status	0.001	1	0.001	1.46	0.23
Sex : age	0.003	3	0.001	2.44	0.07
Captivity status : age	0.000	1	0.000	.75	0.39
Sex : captivity status : age	3.734E-6	1	3.734E-6	0.009	0.93
Error	0.027	65	0.000		

**Table A6. Arachidic acid.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	97.28	1	97.2	1.52	0.22
Captivity status	1097.78	1	1097.78	17.11	<0.0005
Age	502.96	3	167.65	2.61	0.06
Sex : captivity status	1.13	1	1.13	0.02	0.89
Sex : age	168.55	3	56.18	0.88	0.49
Captivity status : age	121.01	1	121.01	1.89	0.17
Sex : captivity status : age	29.54	1	29.54	0.46	0.50
Error	4171.46	65	64.18		

**Table A7. Behenic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	158.20	1	158.20	1.58	0.21
Captivity status	1296.98	1	1296.98	12.93	0.001
Age	320.06	3	106.69	1.06	0.37
Sex : captivity status	75.53	1	75.53	0.75	0.39
Sex : age	77.03	3	25.68	0.26	0.86
Captivity status : age	69.32	1	69.32	0.70	0.41
Sex : captivity status : age	1.50	1	1.50	0.02	0.90
Error	6621.55	66	100.33		

**Table A8. Lignoceric acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	289.50	1	289.50	1.64	0.21
Captivity status	5338.86	1	5338.86	30.27	<0.0005
Age	225.31	3	75.10	0.43	0.74
Sex : captivity status	180.67	1	180.66	1.02	0.32
Sex : age	122.23	3	40.74	0.23	0.88
Captivity status : age	201.61	1	201.61	1.13	0.29
Sex : captivity status : age	30.04	1	30.04	0.17	0.68
Error	11642.03	66	176.40		

**Table A9. Log of cerotic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.06	1	0.06	1.58	0.21
Captivity status	0.09	1	0.09	2.58	0.11
Age	0.07	3	0.02	0.66	0.58
Sex : captivity status	0.06	1	0.06	1.60	0.21
Sex : age	0.03	3	0.01	0.25	0.86
Captivity status : age	0.08	1	0.08	2.28	0.14
Sex : captivity status : age	3.542E-5	1	3.542E-5	0.001	0.98
Error	2.29	66	0.04		

**Table A10. Pristanic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.37	1	0.37	0.92	0.34
Captivity status	2.73	1	2.73	6.88	0.01
Age	0.02	3	0.008	0.02	0.996
Sex : captivity status	0.69	1	0.69	1.74	0.19
Sex : age	0.52	3	0.17	0.43	0.73
Captivity status : age	0.02	1	0.02	0.04	0.85
Sex : captivity status : age	0.17	1	0.17	0.43	0.52
Error	26.188	66	0.40		

**Table A11. Phytanic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	55.55	1	55.55	1.26	0.27
Captivity status	1046.24	1	1046.24	23.75	<0.0005
Age	27.4778	3	9.16	0.21	0.89
Sex : captivity status	99.47	1	99.47	2.26	0.14
Sex : age	53.09	3	17.70	0.40	0.75
Captivity status : age	23.63	1	23.63	0.54	0.47
Sex : captivity status : age	14.04	1	14.04	0.32	0.57
Error	2907.92	66	44.06		

**Table A12. Total saturated fatty acids.**

Source	Sum of Squares	df	Mean Square	F	p-value
Sex	147719.10	1	147719.10	0.26	0.62
Captivity status	852466.25	1	852466.25	1.46	0.23
Age	1803622.56	3	601207.52	1.03	0.38
Sex : captivity status	1911091.90	1	1911091.92	3.28	0.08
Sex : age	1161957.06	3	387319.02	0.67	0.58
Captivity status : age	125341.31	1	125341.31	0.22	0.64
Sex : captivity status : age	411364.68	1	411364.68	0.71	0.40
Error	38424406.25	66	582187.98		

**Table B1. Log of hypogeic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.002	1	0.002	0.01	0.91
Captivity status	3.80	1	3.80	26.12	<0.0005
Age	0.57	3	0.19	1.30	0.28
Sex : captivity status	0.11	1	0.11	0.72	0.40
Sex : age	0.32	3	0.11	0.72	0.54
Captivity status : age	0.000	1	0.000	0.001	0.97
Sex : captivity status : age	0.001	1	0.001	0.008	0.93
Error	9.61	66	0.146		

**Table B2. Log of palmitoleic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.13	1	0.13	1.56	0.22
Captivity status	2.28	1	2.28	26.44	<0.0005
Age	0.56	3	0.19	2.18	0.10
Sex : captivity status	0.005	1	0.005	0.06	0.80
Sex : age	0.12	3	0.04	0.45	0.72
Captivity status : age	0.31	1	0.31	3.57	0.06
Sex : captivity status : age	0.15	1	0.15	1.70	0.20
Error	5.68	66	0.09		

**Table B3. Log of oleic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.03	1	0.03	0.37	0.55
Captivity status	4.76	1	4.76	59.63	<0.0005
Age	0.27	3	0.09	1.14	0.34
Sex : captivity status	0.02	1	0.02	0.28	0.60
Sex : age	0.08	3	0.03	0.32	0.81
Captivity status : age	0.46	1	0.46	5.75	0.02
Sex : captivity status : age	0.002	1	0.002	0.03	0.86
Error	5.27	66	0.08		

**Table B4. Log of total monounsaturated fatty acids.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.02	1	0.02	0.34	0.56
Captivity status	3.69	1	3.69	55.08	<0.0005
Age	0.22	3	0.07	1.09	0.36
Sex : captivity status	0.02	1	0.02	0.29	0.60
Sex : age	0.05	3	0.02	0.25	0.86
Captivity status : age	0.38	1	0.38	5.63	0.02
Sex : captivity status : age	0.005	1	0.005	0.08	0.78
Error	4.42	66	0.07		

**Table C1. Linoleic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	5185.32	1	5185.32	0.09	0.77
Captivity status	6260935.79	1	6260935.79	107.99	<0.0005
Age	367890.24	3	122630.08	2.12	0.11
Sex : captivity status	1287.51	1	1287.51	0.02	0.88
Sex : age	66710.72	3	22236.91	0.38	0.77
Captivity status : age	48995.39	1	48995.39	0.85	0.36
Sex : captivity status : age	19386.66	1	19386.66	0.33	0.57
Error	3826669.47	66	57979.84		

**Table C2.  $\gamma$ -Linolenic acid.**

Source	Sum of squares	df	Mean square	F	p
Sex	8.18	1	8.18	0.006	0.94
Captivity status	70228.17	1	70228.17	52.12	<0.0005
Age	15831.48	3	5277.16	3.92	0.01
Sex : captivity status	185.21	1	185.21	0.14	0.71
Sex : age	4528.86	3	1509.62	1.12	0.35
Captivity status : age	13094.97	1	13094.97	9.72	0.003
Sex : captivity status : age	1916.84	1	1916.84	1.42	0.24
Error	86228.23	64	1347.32		

**Table C3. Arachidonic acid.**

Source	Sum of squares	<i>Df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	212.29	1	212.29	1.21	0.28
Captivity status	3475.42	1	3475.42	19.85	<0.0005
Age	1628.26	3	542.75	3.10	0.03
Sex : captivity status	314.18	1	314.18	1.79	0.19
Sex : age	73.53	3	24.51	0.14	0.94
Captivity status : age	69.27	1	69.27	0.40	0.53
Sex : captivity status : age	88.40	1	88.40	0.505	0.48
Error	11558.469	66	175.128		

**Table C4. Eicosapentaenoic acid.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	7.24	1	7.24	0.32	0.58
Captivity status	840.29	1	840.29	36.86	<0.0005
Age	18.29	3	6.10	0.27	0.85
Sex : captivity status	7.40	1	7.40	0.33	0.57
Sex : age	42.61	3	14.20	0.62	0.60
Captivity status : age	5.60	1	5.60	0.25	0.62
Sex : captivity status : age	4.00	1	4.00	0.18	0.68
Error	1504.57	66	22.80		

**Table C5. Eicosadienoic acid.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	2.49	1	2.49	0.55	0.46
Captivity status	1109.67	1	1109.67	247.18	<0.0005
Age	78.33	3	26.11	5.82	0.001
Sex : captivity status	9.23	1	9.23	2.06	0.16
Sex : age	6.07	3	2.02	0.45	0.72
Captivity status : age	30.51	1	30.51	6.80	0.01
Sex : captivity status : age	0.22	1	0.22	0.05	0.82
Error	287.32	64	4.49		

**Table C6. Total polyunsaturated fatty acids.**

Source	Sum of squares	df	Mean square	F	p
Sex	2847.55	1	2847.55	.043	0.84
Captivity status	7669397.09	1	7669397.09	114.70	<0.0005
Age	520747.09	3	173582.36	2.60	0.06
Sex : captivity status	4674.69	1	4674.69	0.07	0.79
Sex : age	94969.23	3	31656.41	0.47	0.70
Captivity status : age	122883.20	1	122883.20	1.84	0.18
Sex : captivity status : age	6735.47	1	6735.47	0.10	0.75
Error	4413275.90	66	66867.82		

**Table C7. Total  $\omega$ -6 fatty acids.**

Source	Sum of squares	df	Mean square	F	p
Sex	3141.89	1	3141.89	0.048	0.83
Captivity status	7509681.84	1	7509681.84	114.91	<0.0005
Age	514695.13	3	171565.04	2.63	0.06
Sex : captivity status	4310.06	1	4310.06	0.07	0.80
Sex : age	95455.41	3	31818.47	0.49	0.69
Captivity status : age	121229.43	1	121229.43	1.86	0.18
Sex : captivity status : age	7067.86	1	7067.86	0.11	0.74
Error	4313210.09	66	65351.67		

**Table C8. Log of serum  $\omega$ -6: $\omega$ -3 fatty acid ratios.**

Source	Sum of squares	df	Mean square	F	p
Sex	0.28	1	0.28	1.54	0.22
Captivity status	0.31	1	0.31	1.692	0.198
Age	0.23	3	0.08	0.43	0.74
Sex : captivity status	0.15	1	0.15	0.85	0.36
Sex : age	0.09	3	0.03	0.17	0.92
Captivity status : age	0.08	1	0.08	0.44	0.51
Sex : captivity status : age	0.01	1	0.01	0.04	0.85
Error	11.890	66	0.18		



**Table D1. Log of saturated fatty acid:monounsaturated fatty acid ratios (SFA:MUFA).**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	96.27	1	96.27	3.06	0.09
Captivity status	3297.78	1	3297.78	104.98	<0.0005
Age	180.77	3	60.26	1.92	0.14
Sex : captivity status	56.10	1	56.10	1.79	0.19
Sex : age	148.84	3	49.61	1.58	0.20
Captivity status : age	153.65	1	153.65	4.89	0.03
Sex : captivity status : age	70.83	1	70.83	2.26	0.14
Error	2073.36	66	31.42		

**Table D2. Log of saturated fatty acid:polyunsaturated fatty acid ratios (SFA:PUFA).**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	0.01	1	0.01	0.75	0.39
Captivity status	2.86	1	2.86	190.34	<0.0005
Age	0.07	3	0.02	1.45	0.24
Sex : captivity status	0.04	1	0.04	2.64	0.11
Sex : age	0.02	3	0.005	0.35	0.79
Captivity status : age	0.02	1	0.019	1.29	0.26
Sex : captivity status : age	5.870E-7	1	5.870E-7	0.000	1.00
Error	0.99	66	0.015		

**Table D3. Log of the desaturase index.**

Source	Sum of squares	<i>df</i>	Mean square	<i>F</i>	<i>p</i>
Sex	0.002	1	0.002	0.02	0.88
Captivity status	4.87	1	4.87	62.18	<0.0005
Age	0.17	3	0.06	0.72	0.54
Sex : captivity status	0.13	1	0.13	1.66	0.20
Sex : age	0.11	3	0.04	0.45	0.72
Captivity status : age	0.42	1	0.42	5.31	0.02
Sex : captivity status : age	0.02	1	0.02	0.26	0.61
Error	5.17	66	0.08		

**Table D4. Total serum fatty acids.**

<b>Source</b>	<b>Sum of squares</b>	<b><i>df</i></b>	<b>Mean square</b>	<b><i>F</i></b>	<b><i>p</i></b>
Sex	195669.83	1	195669.83	0.16	0.69
Captivity status	15730023.88	1	15730023.88	13.06	0.001
Age	4867415.22	3	1622471.74	1.35	0.27
Sex : captivity status	1927443.44	1	1927443.44	1.60	0.21
Sex : age	2105389.80	3	701796.60	0.58	0.63
Captivity status : age	2175126.54	1	2175126.54	1.81	0.18
Sex : captivity status : age	413071.84	1	413071.84	0.34	0.56
Error	79478845.05	66	1204224.93		