

**Table S1.** Fatty acids composition (%) from various oils detected by GC-FID (1. seal refined; 2. seal carbon; 3. seal A; 4. seal B; 5. seal C; 6. seal D; 7. whale; 8. cod liver; 9. salmon; 10. soy; 11. rapeseed; 12. linseed)

Fatty acids	Abbr.	1	2	3	4	5	6	7	8	9	10	11	12
14:00	M	4.6	4.6	4.8	4.4	4.6	4.9	5.3	3.6	3.8			
14:1n-9	Mt	0.7	0.7	0.6	0.8	0.7	0.7	0.4					
15:00	Pt	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
16:00	P	7.6	7.5	8.6	6.8	7.7	8.6	9.1	10.6	11.7	10.7	4.3	5.5
16:1n-9	Po	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.3			
16:1n-7	Po	16.3	16.1	14.7	17	16	14.8	7.7	7.2	4.2		0.2	
16:2n-4	H	0.6	0.6	0.7	0.7	0.9	0.7	0.4	0.5	0.4			
16:3n-3	R	0.2	0.2	0.4	0.2	0.2	0.4		0.3	0.2			
16:4n-3	Ht	0.3	0.4	0.7	0.4	0.3	0.7	0.2	0.4	0.3			
17:00	Ma	0.1		0.1			0.2	0.3	0.3	0.3			
18:00	S	1.1	1	1.3	0.8	1.1	1.3	2.1	2.6	2.7	3.3	1.8	4.5
18:1n-11	O	4.7	2.2	2.4	3.9	4.2	3.7	2.2	1.5	0.4			
18:1n-9	O	16.4	18.7	17.1	17.1	16.9	16	15.1	15	26.3	24.3	62	20.4
18:1n-7	O	4.2	4.2	4.1	4.3	4.2	4.2	2.6	4.4	2.9	1.5	2.9	0.7
18:2n-6	L	1.8	1.9	1.6	1.9	2.1	1.6	2	2.2	8.9	52.9	17.7	14
18:3n-3	Ln	0.5	0.5	0.6	0.6	0.5	0.6	1.2	0.8	3.4	5.8	8.8	54.7
18:4n-3	St	1.2	1.3	1.7	1.4	1.2	1.7	2.6	2.3	1.2			
20:00	A			0.1	0.1	0.1				0.2	0.5	0.6	0.1
20:1n-11	G	2.5	1.5	1.7	1.9	2.2	1.9	2.4	1.3	0.5	0.2	1.2	0.1
20:1n-9	G	9.2	10	8.5	10	9.5	8.3	12	9	4.4			
20:1n-7	G	0.6	0.6	0.5	0.6	0.6	0.6	0.3	0.4	0.3			
20:2n-6	Ec	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.7			
20:3n-6	Dg							0.1		0.2			
20:3n-3	Dg							0.1		0.3			
20:4n-6	Ar	0.4	0.5	0.6	0.5	0.5	0.6	0.3	0.5	0.4			
20:4n-3	Ar	0.5	0.5	0.5	0.5	0.5	0.5	1.3	0.7	1.4			
EPA	E	6.4	7.1	8.5	7	6.5	8.6	4.5	10.1	5.4			
22:00	B									0.2	0.5	0.3	0.1
22:1n-11	Er	2.2	2	2	2.1	2.1	2	11.7	5.8	4.1			
22:1n-9	Er	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.7	0.7			
DPA	Do	4	4.5	4	3.9	4.1	4.1	2.4	1.5	2.8			
DHA	D	8.1	9.3	9.4	8.2	8.1	9.5	6.9	12.8	8.3			
24:0	Li								0.2	0.1	0.2	0.1	
24:1n-9	N	0.5	0.5	0.6	0.6	0.4	0.6	0.4	0.3	0.9			