



## Properties and Composition of Animal and Marine Fats and Oils

		Tallow(beef)	Lard	Butterfat	Herring Oil	Menhaden Oil	Sardine Oil	Whale Oil
Iodine value		35 - 48	53 - 77	25 - 38	115 - 160	150 - 195	160 - 190	110 - 130
Saponification value		190 - 200	190 - 202	218 - 235	180 - 192	189 - 193	189 - 193	183 - 198
Titer °C		40 - 46	32 - 43	ca 34	23 - 27	31 - 33	28 - 34	22 - 24
Unsaponifiables %								
Fatty acid								
Rosin acid								
Butyric acid	C 4			2 - 4				
Caproic acid	C 6			1 - 3				
Caprylic acid	C 8			0 - 2				
Capric acid	C 10			1 - 3				
Lauric acid	C 12	traces		2 - 5				
Myristic acid	C 14	2 - 6	1 - 4	5 - 15	3 - 8	7 - 8	6 - 8	4 - 8
Pentadecanoic acid	C 15							
Palmitic acid	C 16	24 - 37	20 - 28	26 - 41	8 - 13	17 - 29	16 - 19	7 - 12
Heptadecanoic acid	C 17							
Stearic acid	C 18	14 - 29	5 - 14	6 - 11	1 - 3	3 - 4	2 - 4	1 - 3
Nonadecanoic acid	C 19							
Arachidic acid	C 20	0 - 1		0 - 2				
Behenic acid	C 22							
Lignoceric acid	C 24							
Myristoleic acid	C 14:1	0 - 1		0 - 2				
Palmitoleic acid	C 16:1	2 - 4	1 - 4	2 - 6		7 - 10	8 - 12	7 - 18
Ricinoleic acid	C 18:1-OH							
Oleic acid	C 18:1	26 - 50	41 - 51	18 - 33	17 - 22	13 - 16	10 - 16	28 - 32
Linoleic acid	C 18:2	1 - 5	2 - 15	0 - 4	1 - 4	0 - 1	1 - 3	1 - 2
Isomers	C 18:2							
Linoleic acid	C 18:3	0 - 2	0 - 1		0 - 1	0 - 1	0 - 2	
Eleostearic acid	C 18:3							
Licanic acid	C 18:3							
Stearidonic acid	C 18:4					2 - 4	2 - 3	
Gadoleic acid	C 20:1			0 - 2	9 - 15	1 - 2	2 - 8	12 - 20
Eicosadienoic acid	C 20:2							
Eicosatetraenoic acid	C 20:4					1 - 2	1 - 2	
Eicosapentaenoic acid	C 20:5				6 - 9	10 - 13	10 - 24	1 - 4
Erucic acid	C 22:1			0 - 2	11 - 16	0 - 2	1 - 8	4 - 18
Docosapentaenoic acid	C 22:5				1 - 4	2 - 3	2 - 4	1 - 4
Docosahexaenoic acid	C 22:6				6 - 8	9 - 14	4 - 14	1 - 5