

Fatty Acids of Lake Michigan Coho Salmon

Recent publications have listed the fatty acids of Coho salmon taken along the Pacific Coast and discussed differences in the fatty acids between ocean caught fish and fresh water fingerlings (1-4). Coho

TABLE I
Fatty Acids Found in Lake Michigan Coho Salmon

Fatty acid ^a	Per cent (GLC peak area)
14:0	4.8
15:0	0.5
16:0	10.8
17:0	0.8
18:0	3.2
20:0	0.5
22:0	0.4
14:1 ω6	0.7
15:1 ω6	0.3
16:1 ω7	10.9
18:1 ω9	29.3
20:1 ω9	1.7
22:1 ω9	0.5
24:1 ω9 ?	0.7
16:2 ω4	1.5
18:2 ω6	5.0
20:2 ω6	1.0
22:2 ω6 ?	0.3
16:3 ω4	2.0
18:3 ω6	0.4
18:3 ω3	3.9
20:3 ω6	2.0
18:4 ω3	1.4
20:4 ω6	1.6
20:4 ω3 ?	0.4
22:4 ω6	1.4
22:4 ω3	0.7
20:5 ω3	3.2
22:5 ω6	0.9
22:5 ω3	4.2
22:6 ω3	5.2

^a The number after the ω denotes the position of the ultimate double bond relative to the terminal methyl group.

salmon from the Pacific Coast have been introduced into Lake Michigan and complete their entire life in the fresh water of this lake. For purposes of comparison and because of the importance of this fishery in the Great Lakes, proposed identifications and approximate percentages of total fatty acids in these fresh water salmon are presented in Table I. Methods of identification involved techniques outlined by Saddler et al. (1) and discussions made by Ackman (3,5).

The total lipids extracted from steaks ahead of the dorsal fin (4) of late September 1968 spawning salmon amounted to an average value of 22% (gram of fat per gram of dry weight flesh). The ratio of linoleic (w 6) to linolenic (w 3) type of fatty acids had the value 0.7, which agrees with a proposal by Ackman (5). The high level of oleic acid was considered unusual.

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