

Covance Laboratories Inc.
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Madison, WI 53704
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REPORT OF ANALYSIS



Robert Crayhon, President
Crayhon Research, Inc.
5355 Capital Court #101
Reno, NV 89502

SAMPLE NUMBER: 31006168

BATCH NUMBER: 31006168

DATE ENTERED: 10/24/03

REPORT PRINTED: 11/06/03

EPAX 4510TG LIQUID FISH OIL: CONTROL #1406 - *Raw Material*

<u>ASSAY</u>	<u>ANALYSIS</u>	<u>UNITS</u>
ARSENIC	32.	PPB
CADMIUM	< 10.	PPB
LEAD	< 10.	PPB
MERCURY	< 25.	PPB

SIGNED

DATE 11/06/03

BY AND FOR COVANCE LABORATORIES INC.

METHOD REFERENCES

ICP MASS SPECTROMETRY

Official Methods of Analysis of AOAC INTERNATIONAL 17th Ed., Method 993.14,
AOAC INTERNATIONAL, Gaithersburg, Maryland, (2000) modified.

MERCURY

Analyst, 86:608, (1961). (Modified)

Analytical Chemistry, 40:2085, (1968). (Modified)

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BY:.....

134 Boston Post Rd., P.O. Box 808, Old Saybrook, CT 06475
(860) 388-2378

Robert Crayhon, President
Crayhon Research, Inc.
5355 Capital Court #101
Reno, NV 89502

SAMPLE # 0194-17

SAMPLE SOURCE/IDENTIFICATION: Fish Oil Liquid & CoQ10

Lot #4A15

DATE SAMPLE RECEIVED: 1/19/04

TIME RECEIVED: 1:00 p.m.

TEST METHOD:

MICROBIAL LIMIT TESTS USP 24

TOTAL AEROBIC MICROBIAL COUNT	<u>Less than 10 CFU/gram</u>
ENTEROBACTERIACEAE	<u>Less than 10 CFU/gram</u>
ESCHERICHIA COLI	<u>Less than 10 CFU/gram</u>
SALMONELLA sp	<u>Less than 10 CFU/gram</u>
CULTURE FOR STAPH AUREUS	<u>Less than 10 CFU/gram</u>
CULTURE FOR PSEUDOMONAS AERUGINOSA	<u>Less than 10 CFU/gram</u>
TOTAL MOLD AND YEAST COUNT	<u>Less than 10 CFU/gram</u>

DATE OF REPORT 1/27/04

David M Kirpas

D. M. Kirpas/W. J. O'Shaughnessy
Technical Director

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Central Analytical Laboratories

101 Woodland Hwy., Belle Chasse, Louisiana 70037

(504) 393-5290 LA WATS: 1-800-375-1111 Fax: (504) 393-5270

REPORT OF ANALYSIS

Submitted by: **Robert Crayhon, President**
Crayhon Research, Inc.
5355 Capital Court #101
Reno, NV 89502

Report Date: 08/05/03
Submit Date: 08/01/03
Sample Number: CD23337
Description: EPAX 4510 Fish Oil, 1348 Drum1
Sample Type: OIL
PO Number: 1406DR2 *Raw material*

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BY:

Methodology: American Oil Chemists' Society, Association of Official Analytical Chemists

ANALYTE	RESULT	UNITS	MDL	METHOD	COMPLETED	ANALYST
Peroxide Value	3.49	meq/Kg	0.1	Cd 8-53	08/04/03	JG
Anisidine Value	7.4	---	1.0	Cd 18-90	08/04/03	JG
Fatty Acid Profile						
6:0 Caproic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
7:0 Heptanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
8:0 Caprylic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
9:0 Nonanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
10:0 Capric	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
11:0 Undecanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
12:0 Lauric	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
13:0 Tridecanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
14:0 Myristic	0.34	%	0.1	Ce 1b-89	08/04/03	GJM
14:1 Myristoleic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
15:0 Pentadecanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
15:1 10-Pentadecenoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
16:0 Palmitic	1.45	%	0.1	Ce 1b-89	08/04/03	GJM
16:1 Palmitoleic	0.60	%	0.1	Ce 1b-89	08/04/03	GJM
17:0 Margaric	0.19	%	0.1	Ce 1b-89	08/04/03	GJM
17:1 Margaroleic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
18:0 Stearic	5.98	%	0.1	Ce 1b-89	08/04/03	GJM
18:1n9t Elaidic	0.12	%	0.1	Ce 1b-89	08/04/03	GJM
18:1n9c Oleic	11.16	%	0.1	Ce 1b-89	08/04/03	GJM
19:0 Nonadecanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
18:1n7 Vaccenic	4.30	%	0.1	Ce 1b-89	08/04/03	GJM
18:2n6t Linolelaidic	0.32	%	0.1	Ce 1b-89	08/04/03	GJM
18:2n6c Linoleic	1.45	%	0.1	Ce 1b-89	08/04/03	GJM
20:0 Arachidic	0.59	%	0.1	Ce 1b-89	08/04/03	GJM
18:3n6 gamma-Linolenic	0.26	%	0.1	Ce 1b-89	08/04/03	GJM



Central Analytical
Laboratories, Inc.

CD23337

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ANALYTE	RESULT	UNITS	MDL	METHOD	COMPLETED	ANALYST
20:1n9 Eicosenoic	4.07	%	0.1	Ce 1b-89	08/04/03	GJM
18:3n3 alpha-Linolenic	0.86	%	0.1	Ce 1b-89	08/04/03	GJM
21:0 Henicosanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
20:2n6 Eicosadienoic	0.36	%	0.1	Ce 1b-89	08/04/03	GJM
22:0 Behenic	0.12	%	0.1	Ce 1b-89	08/04/03	GJM
20:3n6 homo-gamma-Linolenic	0.43	%	0.1	Ce 1b-89	08/04/03	GJM
22:1n9 Erucic	0.91	%	0.1	Ce 1b-89	08/04/03	GJM
20:3n3 Eicosatrienoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
20:4n6 Arachidonic	2.93	%	0.1	Ce 1b-89	08/04/03	GJM
23:0 Tricosanoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
22:2n6 Docosadienoic	Not detected	%	0.1	Ce 1b-89	08/04/03	GJM
24:0 Lignoceric	0.19	%	0.1	Ce 1b-89	08/04/03	GJM
20:5n3 Eicosapentaenoic	43.23	%	0.1	Ce 1b-89	08/04/03	GJM
24:1n9 Nervonic	0.10	%	0.1	Ce 1b-89	08/04/03	GJM
22:5n3 Docosapentaenoic	1.26	%	0.1	Ce 1b-89	08/04/03	GJM
22:6n3 Docosaheptaenoic	6.96	%	0.1	Ce 1b-89	08/04/03	GJM
Unknowns	6.75	%	0.1	Ce 1b-89	08/04/03	GJM
18:4n3	1.24	%	0.1	Ce 1b-89	08/04/03	GJM
20:4n7	0.21	%	0.1	Ce 1b-89	08/04/03	GJM
20:4n5	0.19	%	0.1	Ce 1b-89	08/04/03	GJM
20:4n3	2.26	%	0.1	Ce 1b-89	08/04/03	GJM
22:4n9	1.17	%	0.1	Ce 1b-89	08/04/03	GJM

CENTRAL ANALYTICAL LABORATORIES, INC.

John M. Reuther - Laboratory Manager



ChromaDex
(727) 573-9229

Research & Development

13161 56th Court, Ste 201
Clearwater, FL 33760

Assay Result Sheet

Number: ARS-VN00441-0	Sample Name: Fish Oil Liquid with CoQ10	
Date: 2/3/2004	Sample Lot #: 4A15	Control #: VN00441

Test	Method	Specs	Results	Date Tested	Notebook Reference
Eicosapentaenoic Acid	CDXA-AM-015-00 (GC)	44% (by area %)	40.4%	1/28/2004	CDXA006-73
Eicosapentaenoic Acid	CDXA-AM-015-00 (GC)	390 mg/g (by external standard)	390 mg/g (100% LC)	1/28/2004	CDXA006-73
Docosahexaenoic Acid	CDXA-AM-015-00 (GC)	6% (by area %)	7.2%	1/28/2004	CDXA006-73
Docosahexaenoic Acid	CDXA-AM-015-00 (GC)	70 mg/g (by external standard)	65.3 mg/g (93.3% LC)	1/28/2004	CDXA006-73
Coenzyme Q10	CD-ATM-049-04-00 (HPLC)	50 mg/5g	55.4 mg/5g (111% LC)	1/23/2004	RD017-178

Results are average of 3 replicate injections.
Documentation to support these results are on file at ChromaDex and are available upon request.

Approved By:

Mark Roman, Ph.D.
Director, Research & Development

MAR 10 2004

TLI Project: 60305A Enhanced 1668A Polychlorinated Biphenyls Analysis
 Client Sample: LOT#1348 Analysis File: W111302

Client Project: Fish oil analysis	Date Received: 05/16/2003	Spike File: SPPCB81S
Sample Matrix: OIL	Date Extracted: 05/22/2003	ICal: WP56173
TLI ID: 355-10-1	Date Analyzed: 06/17/2003	ConCal: W031110
Sample Size: 5.040 g	Dilution Factor: n/a	% Moisture: n/a
Dry Weight: n/a	Blank File: W111301	% Lipid: n/a
GC Column: DB-35	Analyst: LAG	% Solids: n/a

Analytes	Conc. (pg/g)	Number	DL	EMPC	Ratio	RT	Flags
3,4,4',5-TetraCB (#81)	9.9				0.65	15:59	J_
3,3',4,4'-TetraCB (#77)	EMPC			53.0			JB_
2',3,4,4',5-PentaCB (#123)	559				0.59	16:52	___
2,3',4,4',5-PentaCB (#118)	2280				0.63	17:04	___
2,3,4,4',5-PentaCB (#114)	45.7				0.63	17:44	J_
2,3,3',4,4'-PentaCB (#105)	961				0.64	18:36	___
3,3',4,4',5-PentaCB (#126)	EMPC			30.9			J_
2,3',4,4',5,5'-HexaCB (#167)	207				1.15	20:09	___
2,3,3',4,4',5-HexaCB (#156)	187				1.11	21:30	___
2,3,3',4,4',5'-HexaCB (#157)	55.2				1.16	21:49	J_
3,3',4,4',5,5'-HexaCB (#169)	ND		1.9				___
2,3,3',4,4',5,5'-HeptaCB (#189)	ND		1.5				___
DecaCB (#209)	ND		4.4				___
Total MonoCB	ND		1.3				___
Total DiCB	ND		1.8				___
Total TriCB	EMPC			10.1			___
Total TetraCB	289	10		454			___
Total PentaCB	6810	18		7130			___
Total HexaCB	20170	19		20360			___
Total HeptaCB	6550	12		6590			___
Total OctaCB	306	5		390			Q_
Total NonaCB	ND		4.4				___

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Project: 60305A
 Sample: LOT#1348

Toxicity Equivalents Report
 Analysis File: W111302

Project:	Fish oil analysis	Date Received:	05/16/03	Spike File:	SPPCB81S
Sample Matrix:	OIL	Date Extracted:	05/22/03	ICal:	WP56173
TLI ID:	355-10-1	Date Analyzed:	06/17/03	ConCal:	W031110
Sample Size:	5.040 g	Dilution Factor:	1	% Moisture:	n/a
Dry Weight:	n/a	Blank File:	W111301	% Lipid:	n/a
GC Column:	DB-35	Analyst:	LAG	% Solids:	n/a

Analytes	Conc. (pg/g)		TEF		Equivalent
PCB #81	9.9	x	0.0001	=	0.00099
PCB #77	[53.0]	x	0.0001	=	0.00530
PCB #123	559	x	0.0001	=	0.0559
PCB #118	2280	x	0.0001	=	0.2280
PCB #114	45.7	x	0.0005	=	0.0229
PCB #105	961	x	0.0001	=	0.0961
PCB #126	[30.9]	x	0.1	=	3.09
PCB #167	207	x	0.00001	=	0.00207
PCB #156	187	x	0.0005	=	0.0935
PCB #157	55.2	x	0.0005	=	0.0276
PCB #169	{1.9}	x	0.01	=	0.019
PCB #189	{1.5}	x	0.0001	=	0.00015

Total WHO Interim TEFs of Dioxin-like PCBs: 3.64 pg/g

[...] indicates that the value is that of an EMPC.
 {...} indicates that the value is that of a Detection Limit.

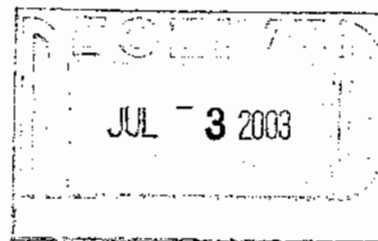
Raw material

Client Project: Fish oil analysis	Date Received: 05/16/03	Spike File: SP161B2S
Sample Matrix: OIL	Date Extracted: 05/22/03	ICal: WF5423B
TLI ID: 355-10-1	Date Analyzed: 05/29/03	ConCal: WB30994
Sample Size: 5.050 g	Dilution Factor: 1	% Moisture: n/a
Dry Weight: n/a	Blank File: W099502	% Lipid: n/a
GC Column: DB-5	Analyst: JLD	% Solids: n/a

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.2}	x	1.	=	0.2
1,2,3,7,8-PeCDD	{0.2}	x	1.	=	0.2
1,2,3,4,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,6,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDD	{1.0}	x	0.01	=	0.010
1,2,3,4,6,7,8,9-OCDD	{2.3}	x	0.0001	=	0.00023
2,3,7,8-TCDF	{1.7}	x	0.1	=	0.17
1,2,3,7,8-PeCDF	{0.1}	x	0.05	=	0.005
2,3,4,7,8-PeCDF	0.58	x	0.5	=	0.29
1,2,3,4,7,8-HxCDF	0.42	x	0.1	=	0.042
1,2,3,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
2,3,4,6,7,8-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	{0.4}	x	0.01	=	0.004
1,2,3,4,7,8,9-HpCDF	{0.5}	x	0.01	=	0.005
1,2,3,4,6,7,8,9-OCDF	{0.7}	x	0.0001	=	0.00007

Total WHO Dioxin TEFs for Humans: 1.1 pg/g

{...} indicates that the value is that of a Detection Limit.



Raw material

