LABORATORY REPORT

Aquatic Testing Laboratories

"dedicated to providing quality aquatic toxicity testing"

4350 Transport Street, Unit 107
Ventura, CA 93003
(805) 650-0546 FAX (805) 650-0756
CA DOHS ELAP Cert. No.: 1775

Date: November 3, 2013

Client: Yolo County District Attorney
301 Second Street
Woodland, CA 95695
Attn: Heidi D'Agostino

Laboratory No.: A-13102803-011/020

Sample Control: The samples were received by ATL with seals intact and with the chain of custody record attached.

Date Sampled: 10/24/13
Date Received: 10/28/13
Date Tested: 10/30/13 to 11/03/13

Sample Analysis: The following analyses were performed on your sample:

CCR Title 22 Fathead Minnow Hazardous Waste Screen Bioassay (Polisini & Miller 1988).

Attached are the test data generated from the analysis of your sample. All testing was conducted under the direct supervision of Joseph A. LeMay.

Result Summary:

Sample ID.	Results
11A- Omega 3	PASS (LC50 > 750 mg/l)
12A- Krill Oil	FAIL (LC50 < 400 mg/l)
13A- Move Free Ultra	PASS (LC50 > 750 mg/l)
14A- Cosamin ASU	FAIL (LC50 < 400 mg/l)
15A- Flex-A-Min Triple Strength	FAIL (>40% mortaility in 750 mg/l)
16A- Melatonin	PASS (LC50 > 750 mg/l)
17A- CO Q-10	PASS (LC50 > 750 mg/l)
18A- Prostrate Formula	PASS (LC50 > 750 mg/l)
19A- Lutein	PASS (LC50 > 750 mg/l)
20A- SAM-E	FAIL (LC50 < 400 mg/l)

Quality Control: Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of the Laboratory's name for advertising or publicity purpose without authorization is prohibited.

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A1310280 3-011

Client/ID: Blo 6.-11A omega 3

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	2			2				2				2				2			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.3	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.2	8.1	8.0	20.4	7.6	8.0	0	20.1	7.6	7.9	0	20.3	7.7	7.8	0	20.2	7.3	7.8	0
400 mg/l B	20.3	8.0	8.0	20.4	7.6	8.0	0	20.1	8.0	8.0	0	20.2	7.8	7.8	0	20.2	7.4	7.8	0
750 mg/l A	20.3	8.1	8.1	20.3	7.7	7.9	0	20.1	7.8	7.9	0	20.1	7.9	7.9	0	20.1	7.8	7.8	0
750 mg/l B	20.4	8.2	7.9	20.4	7.8	8.0	0	20.1	7.8	7.8	0	20.3	7.7	7.9	0	20.1	7.8	7.9	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) —

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: Yes / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	48 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	0	/20
750 mg/l	0	/20

RESULTS
(the checked result applies based on fish survival rates)

✓	PASSED	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
NA	FAILED	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
NA	FAILED	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-012

Client/ID: Yulo6-12A krill oil

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	[illegible]			[illegible]				[illegible]				[illegible]				[illegible]			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.0	8.1	8.0	20.4	8.1	7.9	0	20.1	8.0	7.9	0	20.2	7.7	7.7	7	20.1	7.2	7.7	0
400 mg/l B	20.1	8.0	8.0	20.4	6.9	7.9	0	20.1	8.1	7.8	0	20.1	7.4	7.8	6	20.1	7.3	7.7	0
750 mg/l A	20.2	8.0	8.0	20.4	7.8	7.9	0	20.1	8.1	7.7	10	–	–	–	–	–	–	–	–
750 mg/l B	20.3	8.1	8.1	20.4	7.4	7.9	0	20.2	7.8	7.6	8	20.2	7.8	7.7	2	–	–	–	–

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ___

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: Yes / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	43 mg/l $CaCO_3$	48 mg/l $CaCO_3$

Total Number Dead	
Control	0 /20
400 mg/l	13 /20
750 mg/l	20 /20

RESULTS (the checked result applies based on fish survival rates)		
NA	PASSED	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
NA	FAILED	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
✓	FAILED	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-013

Client/ID: Yd06-13A move free ultra

TEST SUMMARY

Species: ***Pimephales promelas.***
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	[illegible]			[illegible]				[illegible]				[illegible]				[illegible]			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.1	8.0	7.9	20.4	7.3	7.6	0	20.2	6.8	7.8	0	20.2	6.7	7.4	0	20.1	6.3	7.5	0
400 mg/l B	20.2	8.1	7.8	20.3	7.4	7.5	0	20.2	7.0	7.7	0	20.3	6.8	7.3	0	20.0	6.5	7.6	0
750 mg/l A	20.2	8.0	7.8	20.3	7.3	7.6	0	20.3	6.3	7.7	0	20.3	7.1	7.1	0	20.0	6.8	7.7	1
750 mg/l B	20.1	8.1	7.9	20.3	7.4	7.6	0	20.3	7.3	7.7	0	20.3	7.0	7.4	0	20.1	6.4	7.6	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) —

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: Yes / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	39 mg/l $CaCO_3$	49 mg/l $CaCO_3$

Total Number Dead	
Control	0 /20
400 mg/l	0 /20
750 mg/l	1 /20

RESULTS (the checked result applies based on fish survival rates)		
✓	**PASSED**	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
NA	**FAILED**	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
NA	**FAILED**	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A1310280 3-014

Client/ID: Yolo Co.- 14A Cosanin ASU

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	Z			Z				Z				Z				Z			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.7	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.2	8.1	7.0	20.4	7.8	7.2	10	–	–	–	–	–	–	–	–	–	–	–	–
400 mg/l B	20.3	8.2	7.1	20.3	7.9	7.2	10	–	–	–	–	–	–	–	–	–	–	–	–
750 mg/l A	20.3	8.2	7.0	20.3	7.8	7.1	10	–	–	–	–	–	–	–	–	–	–	–	–
750 mg/l B	20.3	8.3	7.0	20.3	7.6	7.3	10	–	–	–	–	–	–	–	–	–	–	–	.

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) —

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: ~~Yes~~ / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	— mg/l $CaCO_3$	— mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	20	/20
750 mg/l	20	/20

RESULTS
(the checked result applies based on fish survival rates)

NA	**PASSED**	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
NA	**FAILED**	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
✓	**FAILED**	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13107803-015

Client/ID: Yolo Co. 15A Flex-A-Min Triple Strength

TEST SUMMARY

Species: ***Pimephales promelas.***
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1100				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.0	8.1	7.0	20.1	7.9	7.0	0	20.1	6.7	7.4	0	20.1	6.1	6.7	0	20.3	6.3	7.4	1
400 mg/l B	20.0	8.1	7.0	20.1	7.8	7.0	0	20.1	6.6	7.3	0	20.1	6.3	6.9	0	20.4	6.1	7.2	2
750 mg/l A	20.1	8.1	7.0	20.1	8.1	7.1	0	20.1	6.1	7.0	0	20.1	6.4	7.1	0	20.5	6.0	7.0	7
750 mg/l B	20.1	8.3	7.0	20.3	8.0	7.0	0	20.2	6.3	7.0	0	20.3	6.4	7.0	0	20.1	6.2	7.0	6

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ___

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: ✓Yes No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	48 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	32 mg/l $CaCO_3$	49 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	3	/20
750 mg/l	13	/20

RESULTS
(the checked result applies based on fish survival rates)

NA	**PASSED**	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
✓	**FAILED**	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
NA	**FAILED**	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-016

Client/ID: Yolo 6-16A Melatonin

TEST SUMMARY

Species: ***Pimephales promelas.***
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	Z			Z				Z				Z				Z			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.7	20.2	7.8	7.7	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.7	8.1	7.5	20.1	7.6	7.5	0	20.2	7.2	7.5	0	20.4	7.3	7.4	0	20.5	7.3	7.8	0
400 mg/l B	20.1	8.0	7.5	20.3	7.7	7.6	0	20.1	8.1	7.6	0	20.5	7.4	7.4	0	20.2	7.4	7.6	0
750 mg/l A	20.7	8.0	7.6	20.4	7.6	7.5	0	20.2	8.2	7.6	0	20.4	7.3	7.5	0	20.1	8.0	7.7	0
750 mg/l B	20.7	8.1	7.6	20.4	7.6	7.6	0	20.5	8.1	7.6	0	20.3	7.6	7.5	0	20.2	8.1	7.7	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) —

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: Yes / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	33 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	59 mg/l $CaCO_3$	119 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	0	/20
750 mg/l	0	/20

RESULTS
(the checked result applies based on fish survival rates)

✓	PASSED	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
NA	FAILED	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
NA	FAILED	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-017

Client/ID: Yolo6-174 CO 0-10

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1100				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.7	20.2	7.8	7.7	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.7	8.1	7.6	20.3	7.5	7.6	0	20.2	6.7	7.6	0	20.1	7.1	7.4	0	20.1	7.0	7.7	0
400 mg/l B	20.3	8.0	7.8	20.3	7.6	7.6	0	20.2	7.7	7.6	0	20.3	7.2	7.3	0	20.2	7.1	7.7	0
750 mg/l A	20.3	8.1	7.8	20.3	7.7	7.6	0	20.3	7.2	7.5	0	20.1	7.0	7.3	0	20.2	7.0	7.5	0
750 mg/l B	20.4	8.2	7.9	20.4	7.6	7.6	0	20.3	6.7	7.5	0	20.3	6.3	7.3	0	20.1	7.1	7.5	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ___

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: ~~Yes~~ / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	43 mg/l $CaCO_3$	47 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	0	/20
750 mg/l	0	/20

RESULTS
(the checked result applies based on fish survival rates)

✓	**PASSED**	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
~~A~~	**FAILED**	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
~~A~~	**FAILED**	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-018

Client/ID: Yolo 6-18A Prostate Formula

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.3	8.1	7.4	20.7	8.0	7.6	0	20.3	8.0	7.5	0	20.3	7.4	7.7	0	20.1	6.8	7.6	0
400 mg/l B	20.3	8.2	7.4	20.4	7.9	7.6	0	20.2	8.0	7.5	0	20.4	7.1	7.6	0	20.1	6.7	7.6	0
750 mg/l A	20.2	8.2	7.4	20.1	6.7	7.6	0	20.3	6.9	7.3	0	20.6	7.2	7.6	0	20.2	7.2	7.6	0
750 mg/l B	20.0	8.2	7.3	20.5	8.0	7.5	0	20.4	6.2	7.4	0	20.3	7.7	7.6	0	20.1	7.3	7.7	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ___

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: ~~Yes~~ / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	73 mg/l $CaCO_3$	105 mg/l $CaCO_3$

Total Number Dead	
Control	0 /20
400 mg/l	0 /20
750 mg/l	0 /20

RESULTS
(the checked result applies based on fish survival rates)

✓	PASSED	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
NA	FAILED	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
NA	FAILED	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-019

Client/ID: Yolo- 19A Lutein

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26 ; min: 0.24 ; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:	Z			Z				Z				Z				Z			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.7	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.1	8.0	7.8	20.2	7.7	8.0	0	20.2	7.3	7.7	0	20.3	7.1	7.8	0	20.7	7.1	7.9	0
400 mg/l B	20.0	8.1	7.7	20.2	7.8	8.1	0	20.3	7.4	7.9	0	20.4	7.3	7.8	0	20.2	7.0	7.8	1
750 mg/l A	20.1	8.2	7.8	20.3	7.7	8.1	0	20.2	7.6	7.8	0	20.5	7.4	7.7	0	20.2	7.2	7.8	1
750 mg/l B	20.2	8.2	7.8	20.2	7.8	8.0	0	20.2	7.7	7.9	0	20.4	7.3	7.7	0	20.2	7.3	7.8	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ___

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: ~~Yes~~ / No

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	32 mg/l $CaCO_3$	49 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	1	/20
750 mg/l	1	/20

RESULTS
(the checked result applies based on fish survival rates)

✓	PASSED	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
NA	FAILED	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
NA	FAILED	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic Testing Laboratories

Lab No.: A13102803-020

Client/ID: Yolo - 2011 Sam-E

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish weight (gm): av: 0.26; min: 0.24; max: 0.33.
Reference Toxicant: SDS conducted monthly.
Test chamber volume: 10 liters.
Temperature: 20 +/- 2°C.
Aeration: none, unless D.O. drops below 5.0 mg/l.
Number of replicates: 2.
Dilution water: Soft reconstituted water (40-48 mg/l $CaCO_3$).

Source: In-Lab Culture.
Regulations: CCR Title 22.
Test Protocol: California F&G/DHS 1988.
Endpoints: Survival at 96 hrs.
Test type: Static.
Feeding: None.
Number of fish per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

TEST DATA

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	10-30-13 1130			10-31-13 1130				11-1-13 1100				11-2-13 1100				11-3-13 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.4	8.0	7.9	20.2	7.8	7.9	0	20.1	7.1	8.0	0	20.2	7.4	8.0	0	20.1	7.8	8.1	0
Control B	20.4	7.9	7.8	20.3	7.9	8.0	0	20.0	8.1	8.1	0	20.3	7.5	7.9	0	20.2	7.6	8.1	0
400 mg/l A	20.0	8.3	5.5	20.4	8.6	4.6	10	–	–	–	–	–	–	–	–	–	–	–	–
400 mg/l B	20.1	8.4	5.5	20.3	8.4	4.4	10	–	–	–	–	–	–	–	–	–	–	–	–
750 mg/l A	20.0	8.5	5.5	20.3	8.5	3.7	10	–	–	–	–	–	–	–	–	–	–	–	–
750 mg/l B	20.1	8.4	5.5	20.4	8.4	3.8	10	–	–	–	–	–	–	–	–	–	–	–	–
pH Control	20.1	8.0	5.5	20.2	8.1	6.0	0	20.1	8.2	6.3	0	20.3	7.7	6.8	0	20.1	8.0	6.9	0

Comments: Extraction method: Mechanical shaking ✓
None (aqueous solution) ✓

pH adjusted to 5.5
Initial pH ~ 3.2

Dissolved Oxygen (DO) readings in mg/l O_2. Test Aerated: Yes / No pH Control adjusted with HCl/NaOH to pH similar to sample tanks

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	32 mg/l $CaCO_3$	46 mg/l $CaCO_3$	3 mg/l $CaCO_3$	70 mg/l $CaCO_3$
Final	32 mg/l $CaCO_3$	47 mg/l $CaCO_3$	– mg/l $CaCO_3$	– mg/l $CaCO_3$

Total Number Dead	
Control	0 /20
400 mg/l	20 /20
750 mg/l	20 /20

RESULTS
(the checked result applies based on fish survival rates)

✓A	PASSED	**LC50 > 750 mg/l** (<40% dead in 750 mg/l conc.)
✓A	FAILED	**≥40% dead in 750 mg/l** (close to passing - definitive test recommended)
✓	FAILED	**LC50 < 400 mg/l** (>60% dead in 400 mg/l conc.)

OFFICE OF THE DISTRICT ATTORNEY
SAN JOAQUIN COUNTY

222 E. Weber Avenue, Suite 678, Stockton, CA 95202
P.O. Box 990, Stockton, California 95201
Telephone: (209) 468-2400 Fax: (209) 468-0314

Please send results to:

Name: Investigator Heidi D'Agostino
Email: heidi.dagostino@yolocounty.org
Fax: 530-666-8423

Testing Facility

Facility name: Aquatic Testing Laboratories
Facility address: 4350 Transport Street, Unit 107, Ventura, CA 93003
Facility contact: Joseph A. LeMay

CHAIN OF CUSTODY RECORD

L1 Sample Number	Description	Manufacturer	CVS Item#	UPC	Strength	Main Ingredient / Or Usage / NOTES	Date sampled	Time sampled	Sample container description: Method of sampling: Composite (C) Grab (G)	Size of sample container (include units)	Type of sample container: Glass (G) Plastic (P) Metal tube (MT) VOA (V)	Evidence tape: Yes (Y) No (N)	Transported in iced cooler: Yes (Y) No (N)	Required analysis: 96-hour fish bioassay
1A	VITAMIN A	RADIANCE	501033	1733902470	8000IU	Vitamin A	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
2A	NIACIN (VITAMIN B-3)	NATURE'S BOUNTY	740535	7431201976	500mg	B-3 (Inositol hexanicotinate)	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
3A	VITAMIN B-6	NATURE MADE	170308	3160401285	100mg	B-6	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
4A	VITAMIN B12	SUNDOWN	718222	3076818565	6000mcg	B-12	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
5A	VITAMIN C	NATURE MADE	695148	3160401489	1000mg	(Man-made Vitamin C) Ascorbic Acid	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
6A	EMERGEN-C	EMERGEN-C	896727	7631430297	1000mg	Natural Vitamin C (critric Acid)	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
7A	CALTRATE GUMMY BITES (D-3)	CALTRATE	854981	30005551750	1000mg	Calcium (Tribasic Calcium Phosphate) & D3	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
8A	CALCIUM CHEWS - CHOC	CALTRATE	826010	30005556819	1200mg	Calcium Carbonate	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
9A	VITAMIN E	NATURE MADE	168864	3160401170	1000IU	Vitamin E	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
10A	GERITOL LIQUID (IRON)	GERITOL	99895	34601701104	18 mg	Ferric Ammonium Citrate	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
11A	OMEGA 3	CENTRUM	854993	30005760450	90% EPA and DHA (600mg)	Fish Oil Concentrate	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
12A	KRILL OIL	NATURE MADE	860744	3160402738	300mg	Krill Oil	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
13A	MOVE FREE ULTRA	SCHIFF	860691	2052511841	40 mg	Hyaluronic Acid & Collagen (for Joints)	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
14A	COSAMIN ASU	NUTRA-MAX	439889	75597082002	1500mg in four capsules	Glucosamine HCl (Joints, but different than Hyaluronic acid/Collagen)	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
15A	FLEX-A-MIN TRIPLE STRENGTH	NATURE'S BOUNTY	156859	69986627822	1237 mg	Chondroitin Sulfate Complex	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
16A	MELATONIN	SUNDOWN	496602	3076815745	6mg	Melatonin	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
17A	CO Q-10	NATURE'S BOUNTY		7431202532	400mg	Co Q-10	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
18A	PROSTATE FORMULA	BIOGLAN	383085	64712500001	N/A	Pomigranite, Quercin, Calcium Carbonate	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
19A	LUTEIN	NATURE'S BOUNTY	238932	7431204902	20mg	Lutein	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X
20A	SAM-E	NATURE MADE	161408	3160441107	400mg	S-adenosylmethionine Tosylate Disulfate	10/24/2013	2:00 p.m.	n/a	200g (min)	P	N	N	X

NOTE: All Samples were taken at 222 E. Weber Ave., Room 678, Stockton, CA 95202

	Name	Title	Date	Time	Remarks
Relinquished by:	[illegible]	Paralegal	10/24/13	2:40 p.m.	
Received by:	[illegible]	Lab Director ATL	10-25-13	10:00 AM	
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					