# Appendix D

## TRAP ANALYSIS GRAPHS AND ECx VALUES

Badger Technical Services, LLC

Graphs produced by TRAP. Corresponding tables display author reported NOEC and LOEC values, ECx estimations as well as TRAP model and assessment notes.

# Regression Analysis of Chlorpyrifos, Diazinon and Malathion Chronic Exposure Response Data

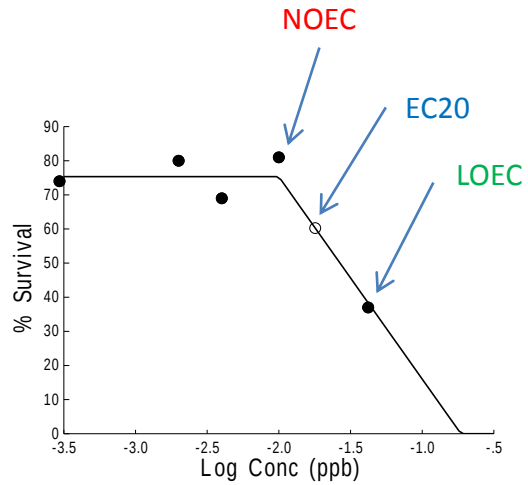
Test species: *Americamysis bahia, Cyprinodon variegatus, Daphnia magna, Jordanella floridae, Leuresthes tenuis, Menidia beryllina, Menidia menidia, Menidia peninsulae, Opsanus beta, Pimephales promelas*

# Chlorpyrifos

Figure 2a and 2b

## Mysid (*Americamysis bahia*)

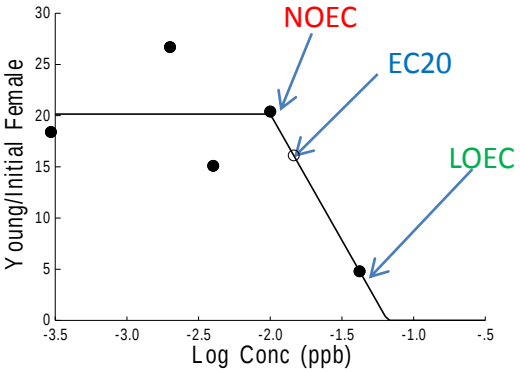
### Ecotox Reference # 3750




% Survival

a

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 210 |
| NOEC (ug/L) | 0.010 |
| LOEC (ug/L) | 0.042 |
| EC05 (conf. limits) | 0.012 ug/L (0.001 - 0.155) |
| EC10 (conf. limits) | 0.013 ug/L (0.001 - 0.137) |
| EC20 (conf. limits) | 0.018 ug/L (0.003 - 0.111) |
| EC50 (conf.limits) | 0.043 ug/L (0.013 - 0.148) |
| Comments: | % Survival, 3 parameter model used |




Young per Initial Female

b

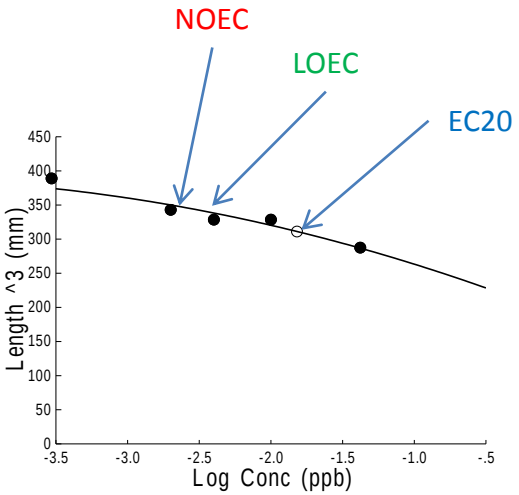
| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 210 |
| NOEC (ug/L) | 0.010 |
| LOEC (ug/L) | 0.042 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 0.015 ug/L (no conf. limits) |
| EC50 (conf.limits) | 0.026 ug/L (no conf. limits) |
| Comments: | Young/ Initial Female, 3 parameter model used |

# Chlorpyrifos

Figure 3a and 3b

## Mysid (*Americamysis bahia*)

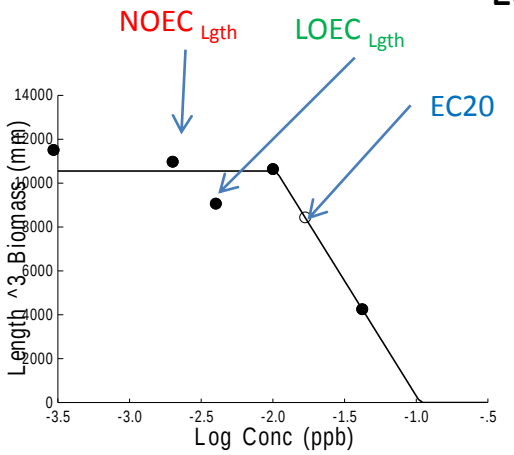
### Ecotox Reference# 3750




Length ^3 (mm)

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 210 |
| NOEC (ug/L) | 0.002 |
| LOEC (ug/L) | 0.004 |
| EC05 (conf. limits) | 0.0005 ug/L (0.00007 - 0.003) |
| EC10 (conf. limits) | 0.002ug/L (0.0006 - 0.007) |
| EC20 (conf. limits) | 0.015 ug/L (0.007-0.035) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length^3, used as a surrogate growth measurement when weight was not measured, 2 parameter model used |




Length ^3 Biomass (mm)

b

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 210 |
| NOEC (ug/L) | 0.002 |
| LOEC (ug/L) | 0.004 |
| EC05 (conf. limits) | 0.012 ug/L (no conf. limits) |
| EC10 (conf. limits) | 0.013ug/L (no conf. limits) |
| EC20 (conf. limits) | 0.017 ug/L (no conf. limits) |
| EC50 (conf.limits) | 0.033 ug/L (no conf. limits) |
| Comments: | Length ^3 Biomass, NOEC and LOEC values based on length NOEC and LOEC values, 3 parameter model used |

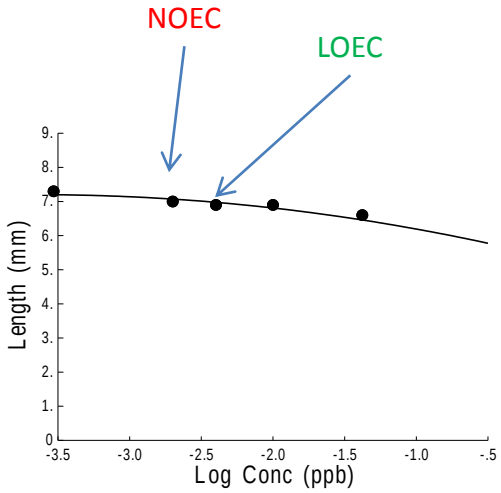
# Chlorpyrifos

## Mysid (*Americamysis bahia*)

## Ecotox Reference # 3750

Length (mm)

a



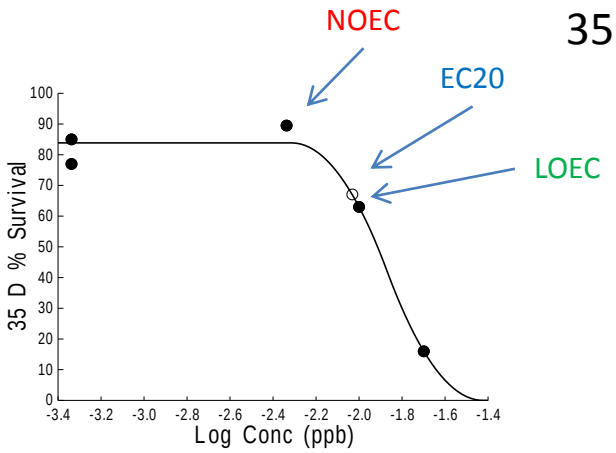

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 210 |
| NOEC (ug/L) | 0.002 |
| LOEC (ug/L) | 0.004 |
| EC05 (conf. limits) | 0.009 ug/L (0.0002 - 0.477) |
| EC10 (conf. limits) | 0.039ug/L (0.002 - 0.813) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length, small difference between NOEC, LOEC length values, 3 parameter model used |

# Chlorpyrifos

Figure 5a and 5b

## Mysid (*Americamysis bahia*)

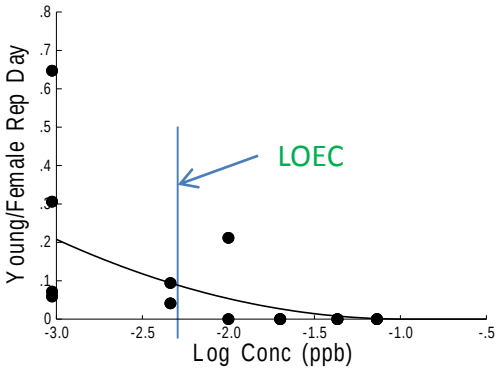
MRID # 42264901




### 35 Day % Survival

a

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 403 |
| NOEC (ug/L) | 0.0046 |
| LOEC (ug/L) | 0.0100 |
| EC05 (conf. limits) | 0.0067 ug/L (0.0024 - 0.0184) |
| EC10 (conf. limits) | 0.0077 ug/L (0.0036 - 0.0166) |
| EC20 (conf. limits) | 0.0092 ug/L (0.0052 - 0.0164) |
| EC50 (conf.limits) | 0.0135 ug/L (0.0092 - 0.0198) |
| Comments: | 35 D % Survival, 14 day survival also reported, 3 parameter model used |




### Young per Female Reproductive Day

b

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 403 |
| NOEC (ug/L) | < 0.0046 |
| LOEC (ug/L) | 0.0046 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Yg/Female Rep Day, insufficient reproduction to analyze, possible solvent effects noted in publication, 3 parameter model used |

Figure 6a and 6b

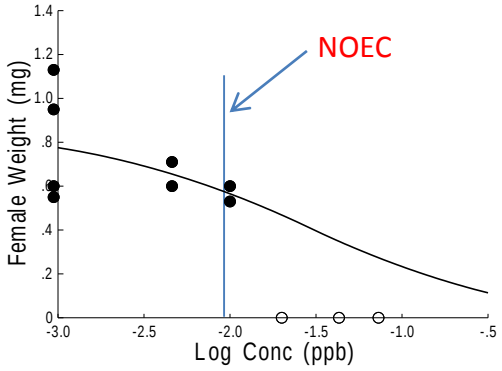
# Chlorpyrifos

## Mysid (*Americamysis bahia*)

## MRID # 42664901

### Female Weight (mg)

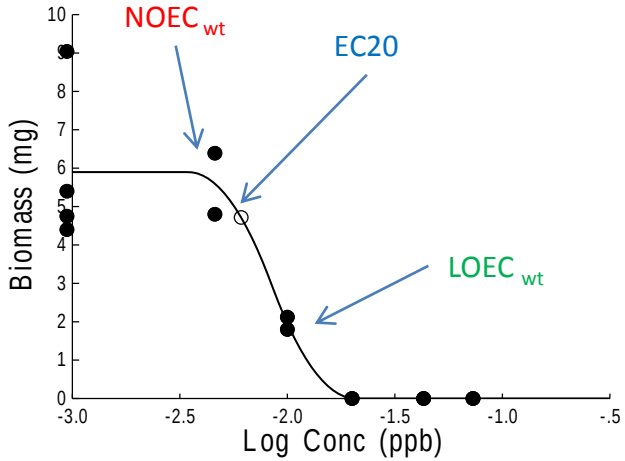
a




| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 403 |
| NOEC (ug/L) | 0.0100 |
| LOEC (ug/L) | >0.0100 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Female Weight, insufficient effects, possible solvent effects were noted in publication, 3 highest concentrations not included in analysis because of mortality 3 parameter model used |

### Female Biomass (mg)

b




| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 403 |
| NOEC (ug/L) | 0.0046 |
| LOEC (ug/L) | 0.0100 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | 0.0085 ug/L (0.0058 - 0.0123) |
| Comments: | Female Biomass, possible solvent effects were noted in publication, NOEC and LOEC values were based on weight NOEC and LOEC values because of incomplete survival analysis, 3 parameter model used |

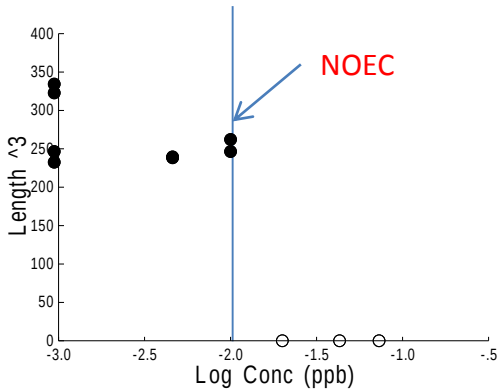
# Chlorpyrifos

## Mysid (*Americamysis bahia*)

## MRID # 42664901

### Female Length^3 (mm)

### a

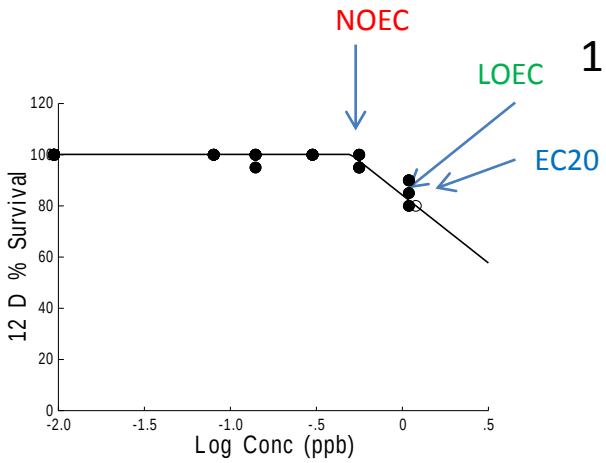



| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 403 |
| NOEC (ug/L) | 0.010 |
| LOEC (ug/L) | >0.100 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | Female Length^3, insufficient effects, possible solvent effects were noted in publication, 3 highest concentrations not included in analysis because of mortality, Data does not support regression analysis |

# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

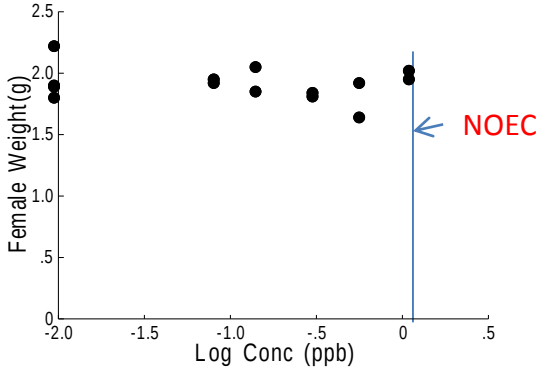
MRID# 42834401




### 12 Day % Survival

a

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 0.57 |
| LOEC (ug/L) | 1.09 |
| EC05 (conf. limits) | 0.62 ug/L (0.55 - 0.7) |
| EC10 (conf. limits) | 0.77 ug/L (0.7 - 0.85) |
| EC20 (conf. limits) | 1.20 ug/L (1.03 - 1.38) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx value |
| Comments: | 12 D % Survival, used to estimateEC20 or lower only, 195 day survival also reported but with insufficient effects, 3 parameter model used |




### Female Weight (g)

b

| TRAP Model Used | None |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | Female Weight, insufficient effects, Data does not support regression analysis |

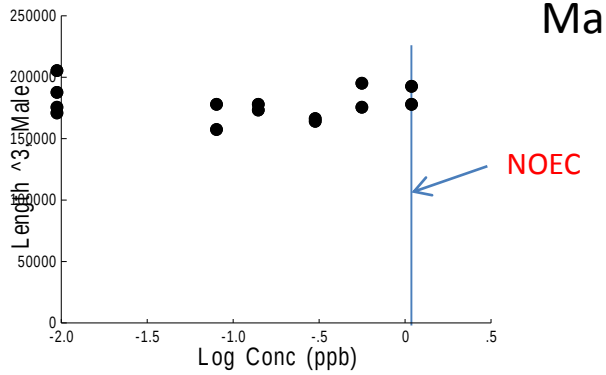
# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

## MRID# 42834401

### Male Length^3 (mm)

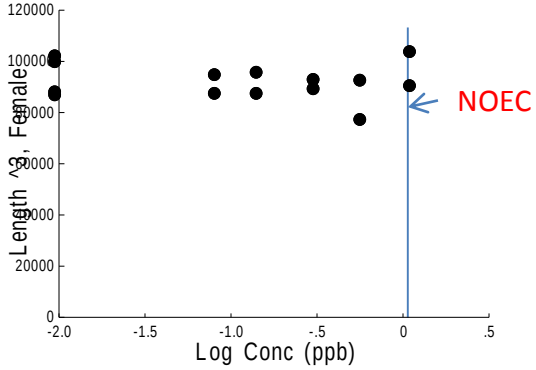
a




| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | 216 D Length^3 Male, insufficient effects, Data does not support regression analysis |

### Female Length^3 (mm)

b




| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | 216 D Length^3 Female, insufficient effects, Data does not support regression analysis |

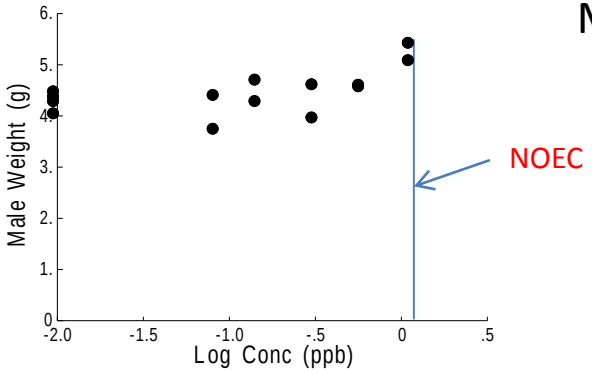
# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

## MRID# 42834401

### Male Weight (g)

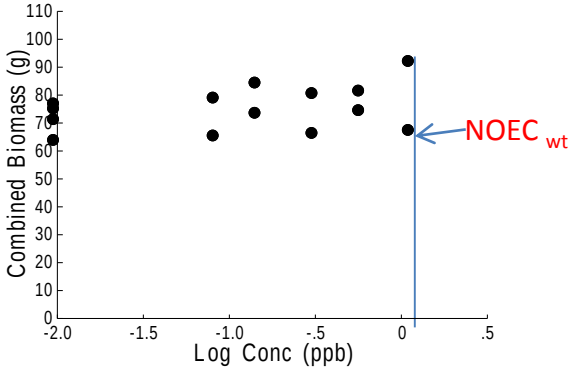
a




| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | Male Weight, insufficient effects, Data does not support regression analysis |

### Combined Biomass (g)

b




| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | Combined Biomass based on survival at 195 days, weight at 216 days, insufficient effects, NOEC value was based on weight at 216 days NOEC value, Data does not support regression analysis |

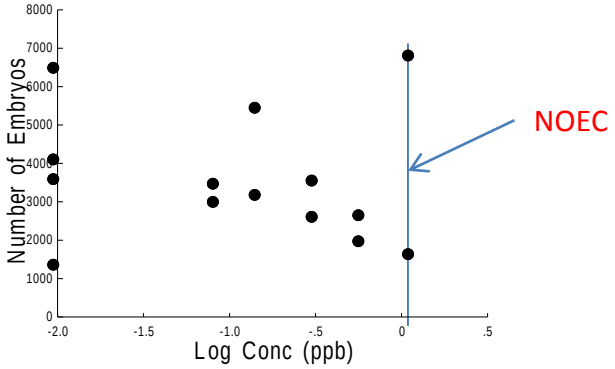
# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

## MRID# 42834401

### Number of Embryos

### a

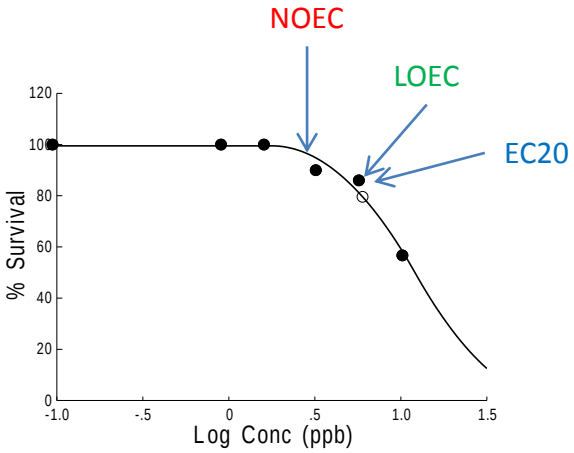



| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 402 |
| NOEC (ug/L) | 1.09 |
| LOEC (ug/L) | >1.09 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | Number of Embryos, insufficient effects, data does not support regression analysis |

# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

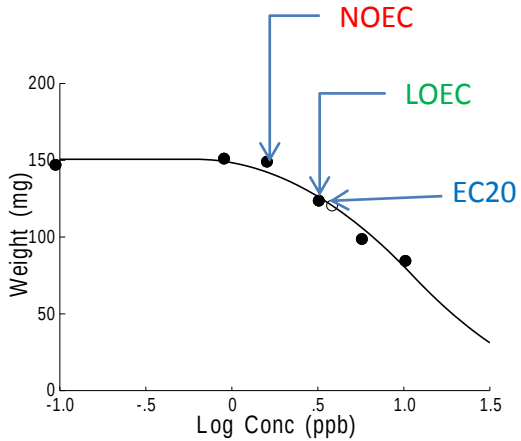
### Ecotox Reference #15462




% Survival

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 458 |
| NOEC (ug/L) | 3.2 |
| LOEC (ug/L) | 5.7 |
| EC05 (conf. limits) | 3.3 ug/L (1.6 - 6.5) |
| EC10 (conf. limits) | 4.2 ug/L (2.4 - 7.2) |
| EC20 (conf. limits) | 6.0 ug/L (4.2 - 8.5) |
| EC50 (conf.limits) | 12.1 ug/L (8.6 - 17.1) |
| Comments: | % Survival, 3 parameter model used |




Weight (mg)

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 458 |
| NOEC (ug/L) | 1.6 |
| LOEC (ug/L) | 3.2 |
| EC05 (conf. limits) | 1.5 ug/L (0.4 - 5.5) |
| EC10 (conf. limits) | 2.2 ug/L (0.8 - 6.3) |
| EC20 (conf. limits) | 3.8 ug/L (1.9 - 7.7) |
| EC50 (conf.limits) | 11.2 ug/L (7.2 - 17.4) |
| Comments: | Weight, 3 parameter model used |

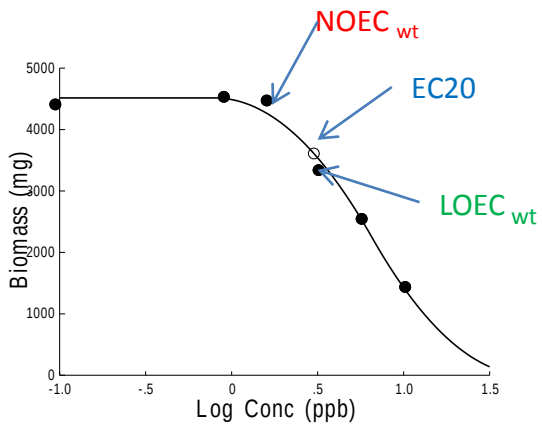
# Chlorpyrifos

## Fathead Minnow (*Pimephales promelas)*

## Ecotox Reference #15462

Biomass (mg)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 1 |
| AquaChronTox ID | 458 |
| NOEC (ug/L) | 1.6 |
| LOEC (ug/L) | 3.2 |
| EC05 (conf. limits) | 1.5 ug/L (0.8 - 3.2) |
| EC10 (conf. limits) | 2.0ug/L (1.1 - 3.6) |
| EC20 (conf. limits) | 3.0 ug/L (2.0 - 4.5) |
| EC50 (conf.limits) | 6.5 ug/L (5.2 - 8.1) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values<br>3 parameter model used |

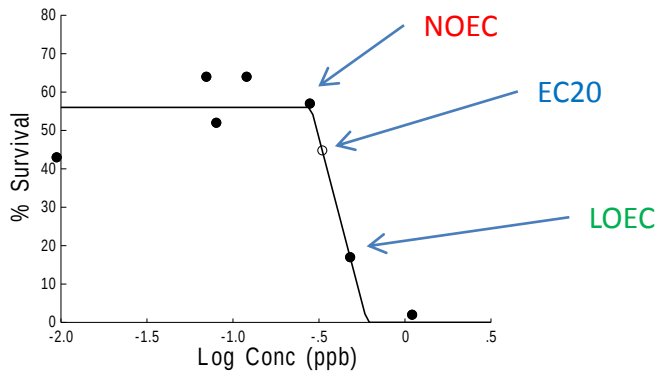
# Chlorpyrifos

## Atlantic Silverside (*Menidia menidia*)

### Ecotox Reference # 4225

% Survival

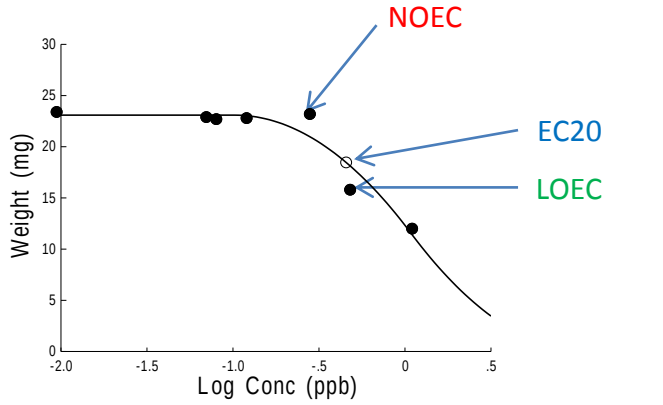
a




| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 610 |
| NOEC (ug/L) | 0.28 |
| LOEC (ug/L) | 0.48 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC50 (conf.limits) | 0.41 ug/L (no conf. limits) |
| Comments: | % Survival, 3 parameter model used |

Weight (mg)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 610 |
| NOEC (ug/L) | 0.28 |
| LOEC (ug/L) | 0.48 |
| EC05 (conf. limits) | 0.22 ug/L (0.06 - 0.72) |
| EC10 (conf. limits) | 0.29 ug/L (0.11 - 0.76) |
| EC20 (conf. limits) | 0.45 ug/L (0.24 - 0.87) |
| EC50 (conf.limits) | 1.08 ug/L (0.68 - 1.7) |
| Comments: | Weight, 3 parameter model used |

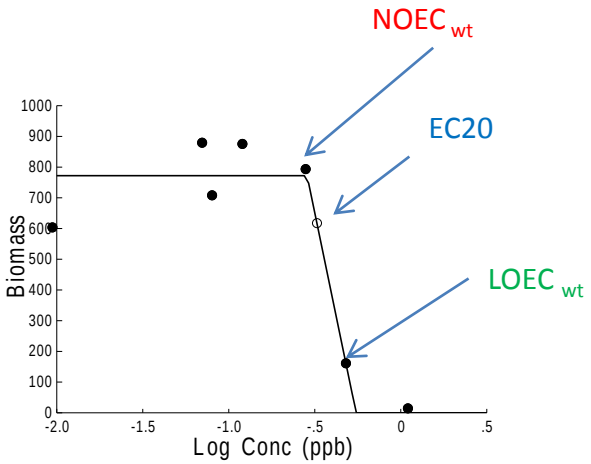
# Chlorpyrifos

## Atlantic Silverside (*Menidia menidia*)

## Ecotox Reference # 4225

Biomass (mg)

a

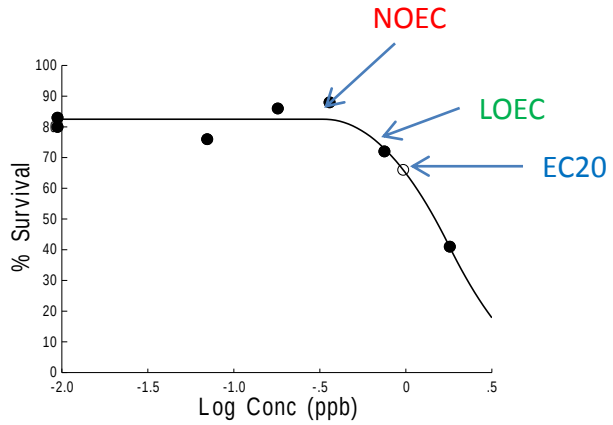



| | |
|---|---|
| TRAP Model Used | Piecewise Linear |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 610 |
| NOEC (ug/L) | 0.28 |
| LOEC (ug/L) | 0.48 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx value |
| EC50 (conf.limits) | 0.40 ug/L (no conf. limits) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values<br>3 parameter model used |

# Chlorpyrifos

## Inland Silverside (*Menidia beryllina*)

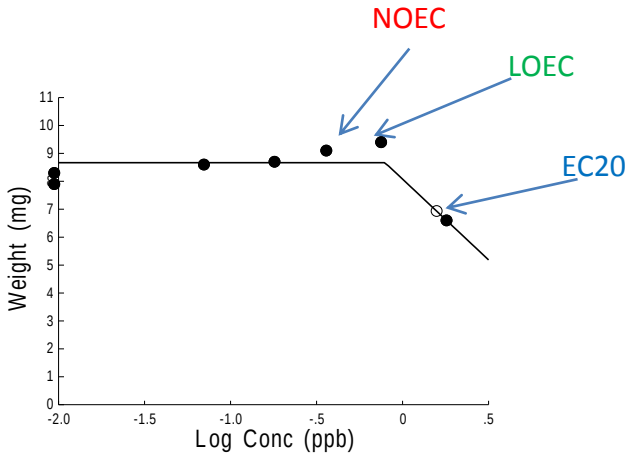
### Ecotox Reference # 4225




% Survival

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 180 |
| NOEC (ug/L) | 0.36 |
| LOEC (ug/L) | 0.75 |
| EC05 (conf. limits) | 0.57 ug/L (0.257 - 1.28) |
| EC10 (conf. limits) | 0.71 ug/L (0.37 - 1.36) |
| EC20 (conf. limits) | 0.97 ug/L (0.61 - 1.52) |
| EC50 (conf.limits) | 1.78 ug/L (1.35 - 2.35) |
| Comments: | % Survival, 3 parameter model used |




Weight (mg)

b

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 180 |
| NOEC (ug/L) | 0.36 |
| LOEC (ug/L) | 0.75 |
| EC05 (conf. limits) | 0.94 ug/L (no conf. limits) |
| EC10 (conf. limits) | 1.12 ug/L (no conf. limits) |
| EC20 (conf. limits) | 1.58 ug/L (no conf. limits) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Weight, significant increase In weight at 0.75 ppb, used for EC20 or lower, 3 parameter model used |

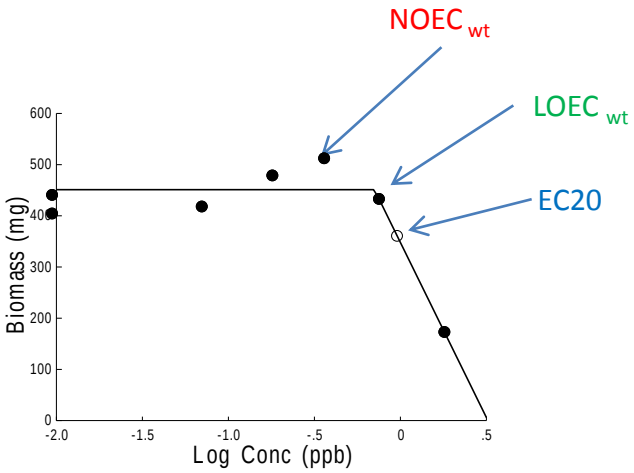
# Chlorpyrifos

## Inland Silverside (*Menidia beryllina*)

### Ecotox Reference # 4225

Biomass (mg)

a

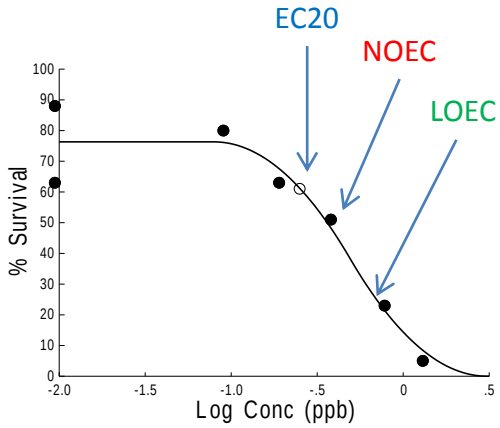



| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 180 |
| NOEC (ug/L) | 0.36 |
| LOEC (ug/L) | 0.75 |
| EC05 (conf. limits) | 0.76 ug/L (0.49 - 1.17) |
| EC10 (conf. limits) | 0.82 ug/L (0.55 - 1.22) |
| EC20 (conf. limits) | 0.96 ug/L (0.68 - 1.35) |
| EC50 (conf.limits) | 1.50 ug/L (1.07 - 2.12) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values<br>3 parameter model used |

# Chlorpyrifos

## Tidewater Silverside (*Menidia peninsulae*)

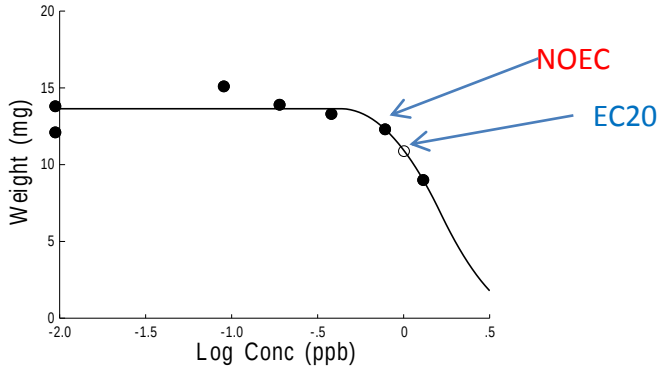
### Ecotox Reference # 4225




% Survival

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 181 |
| NOEC (ug/L) | 0.38 |
| LOEC (ug/L) | 0.78 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 0.25 ug/L (0.10 - 0.65) |
| EC50 (conf.limits) | 0.49 ug/L (0.28 - 0.87) |
| Comments: | % Survival, 3 parameter model used |




Weight (mg)

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 181 |
| NOEC (ug/L) | 0.78 |
| LOEC (ug/L) | >0.78 |
| EC05 (conf. limits) | 0.66 ug/L (0.25 - 1.71) |
| EC10 (conf. limits) | 0.78 ug/L (0.38- 1.60) |
| EC20 (conf. limits) | 1.00 ug/L (0.66 - 1.53) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Weight, used to estimate EC20 or lower only, highest conc not included in NOEC/LOEC determinations due to small sample size, 3 parameter model used |

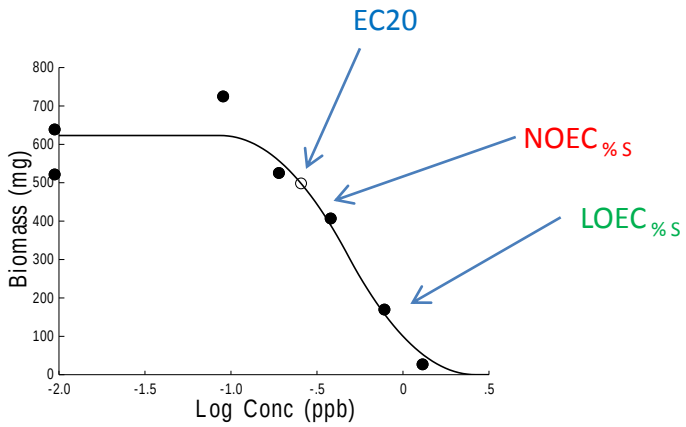
# Chlorpyrifos

## Tidewater Silverside (*Menidia peninsulae*)

## Ecotox Reference # 4225

Biomass (mg)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 181 |
| NOEC (ug/L) | 0.38 |
| LOEC (ug/L) | 0.78 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 0.26 ug/L (0.11 - 0.59) |
| EC50 (conf.limits) | 0.48 ug/L (0.29 - 0.81) |
| Comments: | Biomass, NOEC and LOEC values based on % survival NOEC and LOEC values, 3 parameter model used |

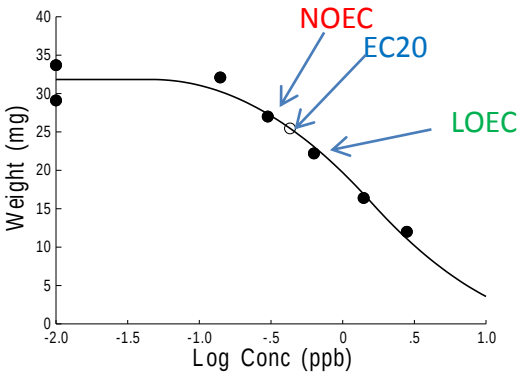
# Chlorpyrifos

Figure 20a and 20b

## California Grunion (*Leuresthes tenuis)*

### Ecotox Reference # 12881

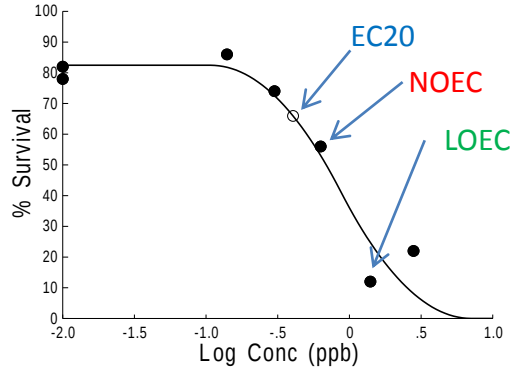
### Test 1 of 2




Weight (mg)

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 92 |
| NOEC (ug/L) | 0.30 |
| LOEC (ug/L) | 0.63 |
| EC05 (conf. limits) | 0.14 ug/L (0.03 - 0.62) |
| EC10 (conf. limits) | 0.22 ug/L (0.07 - 0.74) |
| EC20 (conf. limits) | 0.43 ug/L (0.18 - 1.00) |
| EC50 (conf.limits) | 1.57 ug/L (0.96 - 2.56) |
| Comments: | Weight, 3 parameter model used |




% Survival

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 92 |
| NOEC (ug/L) | 0.63 |
| LOEC (ug/L) | 1.4 |
| EC05 (conf. limits) | 0.21 ug/L (0.03 - 1.31) |
| EC10 (conf. limits) | 0.27 ug/L (0.07 - 1.15) |
| EC20 (conf. limits) | 0.40 ug/L (0.14 - 1.15) |
| EC50 (conf.limits) | 0.87 ug/L (0.46 - 1.64) |
| Comments: | % Survival, 3 parameter model used |

# Chlorpyrifos

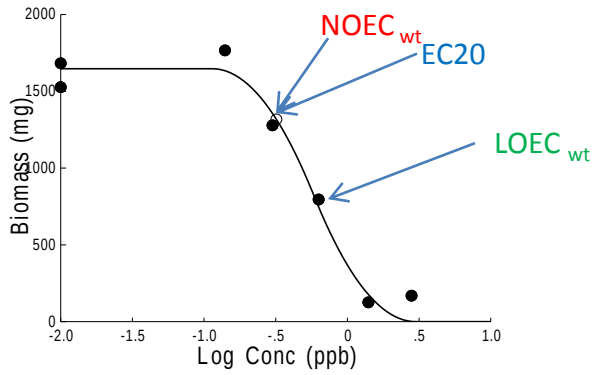
## California Grunion (*Leuresthes tenuis)*

### Ecotox Reference # 12881

### Test 1 of 2

Biomass (mg)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 1 |
| AquaChronTox ID | 92 |
| NOEC (ug/L) | 0.30 |
| LOEC (ug/L) | 0.63 |
| EC05 (conf. limits) | 0.19 ug/L (0.08 - 0.45) |
| EC10 (conf. limits) | 0.24 ug/L (0.11 - 0.52) |
| EC20 (conf. limits) | 0.32 ug/L (0.17 - 0.58) |
| EC50 (conf.limits) | 0.58 ug/L (0.41 - 0.83) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values, 3 parameter model used |

# Chlorpyrifos

Figure 22a and 22b

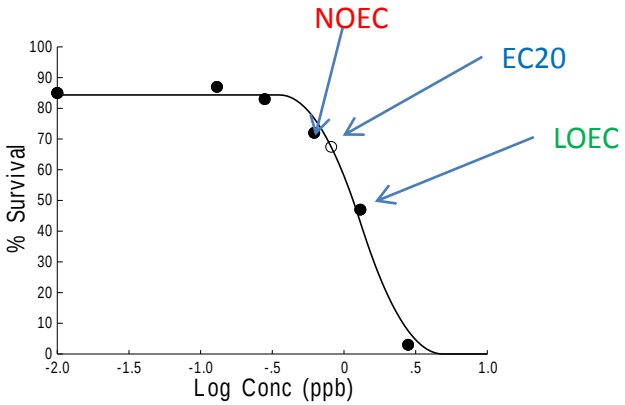
## California Grunion (*Leuresthes tenuis)*

### Ecotox Reference # 12881

### Test 2 of 2

% Survival

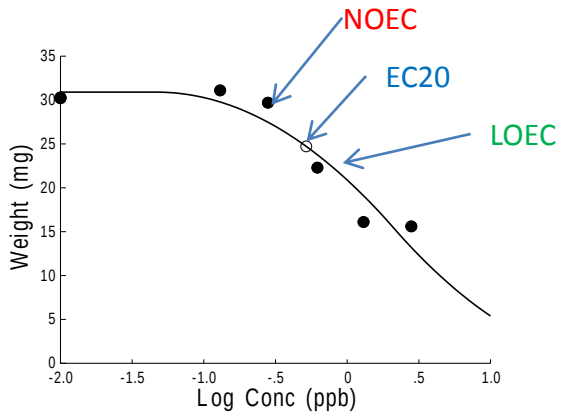
a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 93 |
| NOEC (ug/L) | 0.62 |
| LOEC (ug/L) | 1.3 |
| EC05 (conf. limits) | 0.54 ug/L (0.32 - 0.91) |
| EC10 (conf. limits) | 0.64 ug/L (0.43 - 0.96) |
| EC20 (conf. limits) | 0.81 ug/L (0.62 - 1.07) |
| EC50 (conf.limits) | 1.31 ug/L (1.12 - 1.56) |
| Comments: | % Survival, 3 parameter model used |

Weight (mg)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 93 |
| NOEC (ug/L) | 0.28 |
| LOEC (ug/L) | 0.62 |
| EC05 (conf. limits) | 0.16 ug/L (0.02 - 1.27) |
| EC10 (conf. limits) | 0.26 ug/L (0.05 - 1.36) |
| EC20 (conf. limits) | 0.52 ug/L (0.16 - 1.65) |
| EC50 (conf.limits) | 2.10 ug/L (1.02 - 4.33) |
| Comments: | Weight, 3 parameter model used |

# Chlorpyrifos

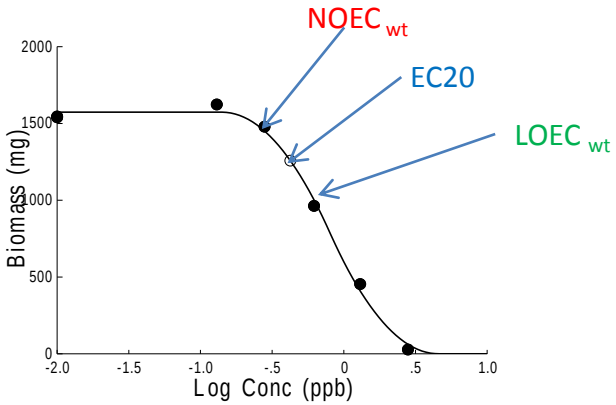
## California Grunion (*Leuresthes tenuis*)

### Ecotox Reference # 12881

### Test 2 of 2

Biomass (mg)

a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 93 |
| NOEC (ug/L) | 0.28 |
| LOEC (ug/L) | 0.62 |
| EC05 (conf. limits) | 0.25 ug/L (0.17 - 0.36) |
| EC10 (conf. limits) | 0.31 ug/L (0.23 - 0.42) |
| EC20 (conf. limits) | 0.42 ug/L (0.34 - 0.53) |
| EC50 (conf.limits) | 0.80 ug/L (0.70 - 0.92) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values, 3 parameter model used |

# Chlorpyrifos

Figure 24a and 24b

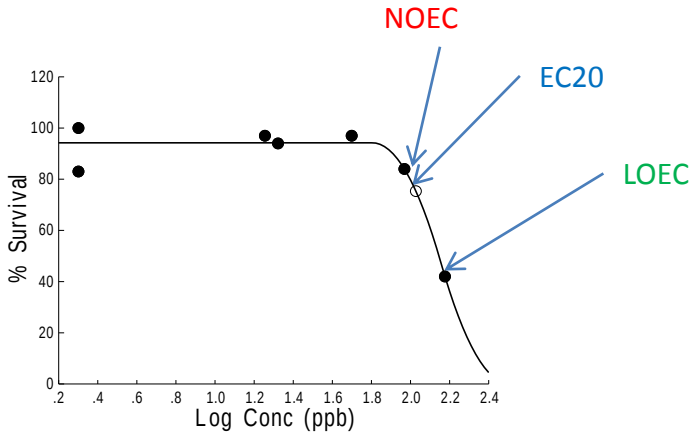
## Gulf Toadfish (*Opsanus beta)*

## Ecotox Reference # 11709

## Test 1 of 2

% Survival

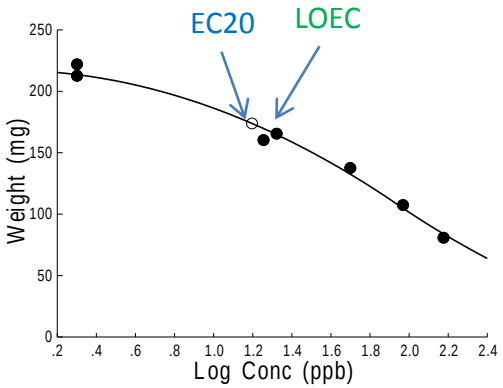
a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 172 |
| NOEC (ug/L) | 93 |
| LOEC (ug/L) | 150 |
| EC05 (conf. limits) | 82 ug/L (52 - 130) |
| EC10 (conf. limits) | 92 ug/L (63 - 133) |
| EC20 (conf. limits) | 106 ug/L (81 - 140) |
| EC50 (conf.limits) | 143 ug/L (122 - 168) |
| Comments: | % Survival, 3 parameter model used |

Weight (mg)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 172 |
| NOEC (ug/L) | < 18 |
| LOEC (ug/L) | 18 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 16 ug/L (11 - 22) |
| EC50 (conf.limits) | 86 ug/L (70 - 105) |
| Comments: | Weight, 3 parameter model used |

Figure 25a

# Chlorpyrifos

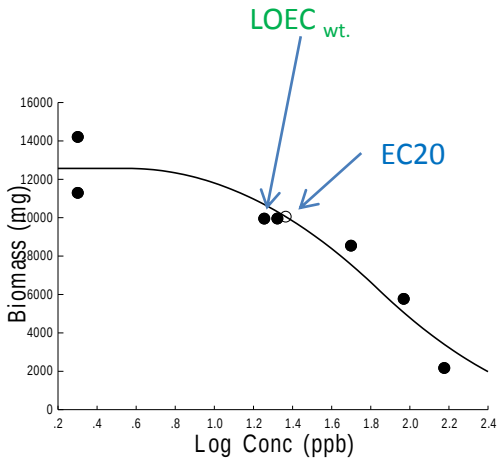
## Gulf Toadfish (*Opsanus beta)*

### Ecotox Reference # 11709

### Test 1 of 2

Biomass (mg)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 172 |
| NOEC (ug/L) | < 18 |
| LOEC (ug/L) | 18 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 23 ug/L (7 - 78) |
| EC50 (conf.limits) | 68 ug/L (34 - 139) |
| Comments: | Biomass, LOEC value was based on weight LOEC value, 3 parameter model used |

# Chlorpyrifos

## Gulf Toadfish (*Opsanus beta*)

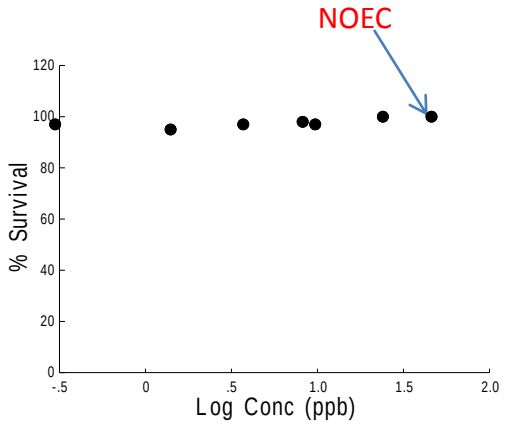
## Ecotox Reference # 11709

## Test 2 of 2

Figure 26a and 26b

% Survival

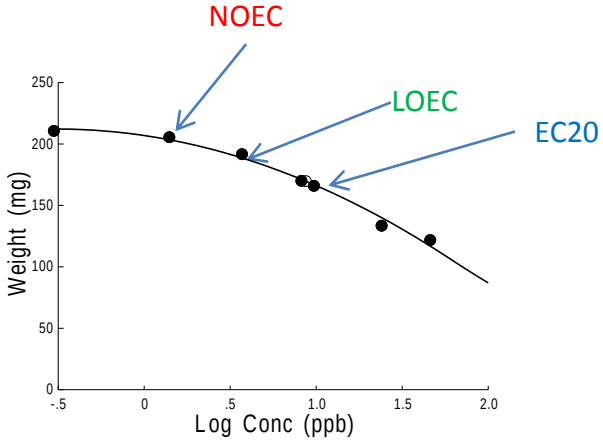
a




| TRAP Model Used | None |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 173 |
| NOEC (ug/L) | 46 |
| LOEC (ug/L) | >46 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | % Survival, insufficient effects, Data does not support regression analysis |

Weight (mg)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 173 |
| NOEC (ug/L) | 1.4 |
| LOEC (ug/L) | 3.7 |
| EC05 (conf. limits) | 1.6 ug/L (0.7 - 4.0) |
| EC10 (conf. limits) | 3.3 ug/L (1.6 - 6.7) |
| EC20 (conf. limits) | 8.7 ug/L (5.3 - 14.3) |
| EC50 (conf.limits) | 60.6 ug/L (43.2 - 85.0) |
| Comments: | Weight, 3 parameter model used |

# Chlorpyrifos

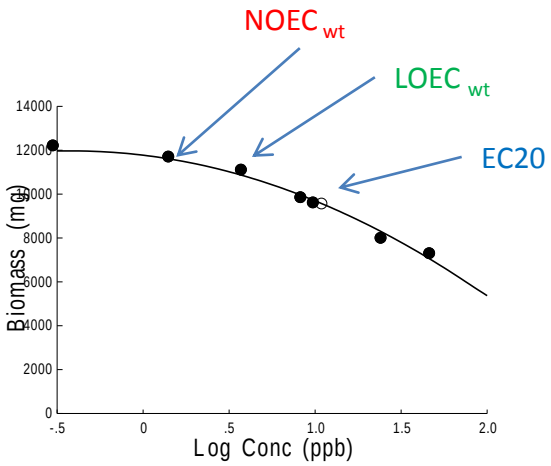
## Gulf Toadfish (*Opsanus beta*)

### Ecotox Reference # 11709

### Test 2 of 2

Biomass (mg)

a



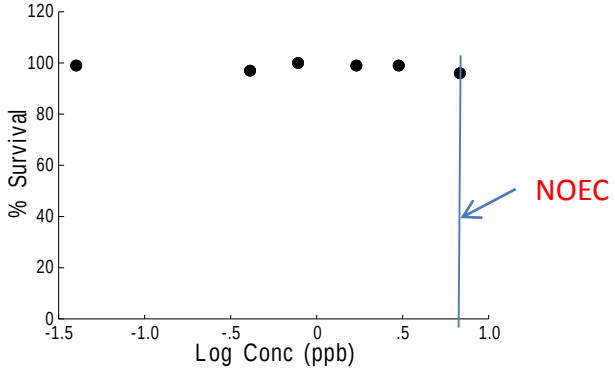

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 173 |
| NOEC (ug/L) | 1.4 |
| LOEC (ug/L) | 3.7 |
| EC05 (conf. limits) | 2.0 ug/L (1.3 - 3.3) |
| EC10 (conf. limits) | 4.1 ug/L (2.9 - 5.8) |
| EC20 (conf. limits) | 10.9 ug/L (8.8 - 13.4) |
| EC50 (conf.limits) | 75.7 ug/L (53.9 - 106.4) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values<br>3 parameter model used |

# Chlorpyrifos

## Sheepshead Minnow (*Cyprinodon variegatus)*

### Ecotox Reference # 7769

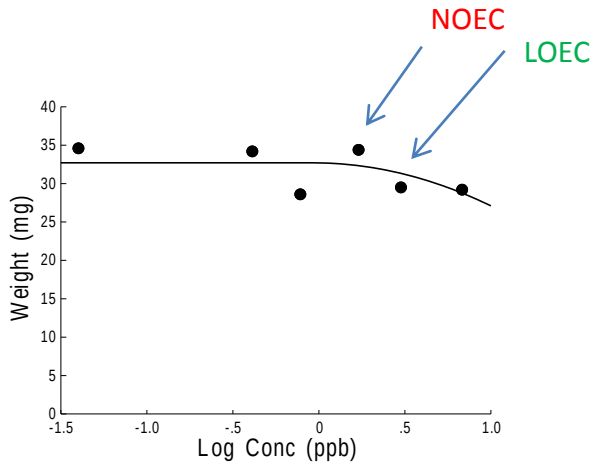
### Test 1 of 2




% Survival

a

| | |
|---|---|
| TRAP Model Used | None |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 174 |
| NOEC (ug/L) | 6.8 |
| LOEC (ug/L) | > 6.8 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | % Survival, insufficient effects, Data does not support regression analysis |




Weight (mg)

b

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 174 |
| NOEC (ug/L) | 1.7 |
| LOEC (ug/L) | 3.0 |
| EC05 (conf. limits) | 3.3 ug/L (0.1 - 167) |
| EC10 (conf. limits) | 5.7 ug/L (0.4 - 86) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Weight, , used to estimate EC20 or lower only, 3 parameter model used, * conf.limits could not be reasonably estimated |

# Chlorpyrifos

Figure 29a

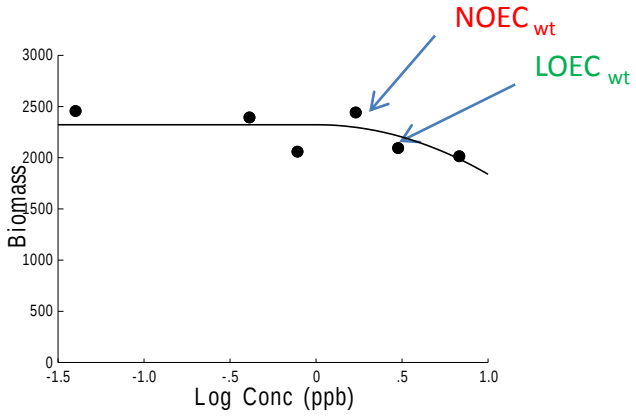
## Sheepshead Minnow (*Cyprinodon variegatus)*

## Ecotox Reference # 7769

## Test 1 of 2

Biomass (mg)

a



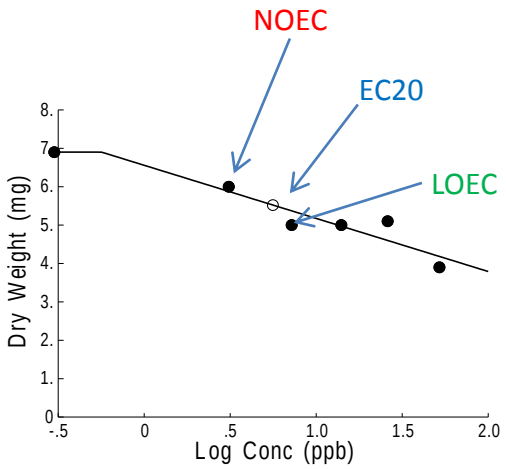

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 174 |
| NOEC (ug/L) | 1.7 |
| LOEC (ug/L) | 3.0 |
| EC05 (conf. limits) | 3.1 ug/L (0.1 - 78.0) |
| EC10 (conf. limits) | 4.9 ug/L (0.6 - 40.2) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Biomass, insufficient effects, NOEC and LOEC values were based on weight NOEC and LOEC values, 3 parameter model used |

# Chlorpyrifos

## Sheepshead Minnow (*Cyprinodon variegatus*)

### Ecotox Reference # 7769

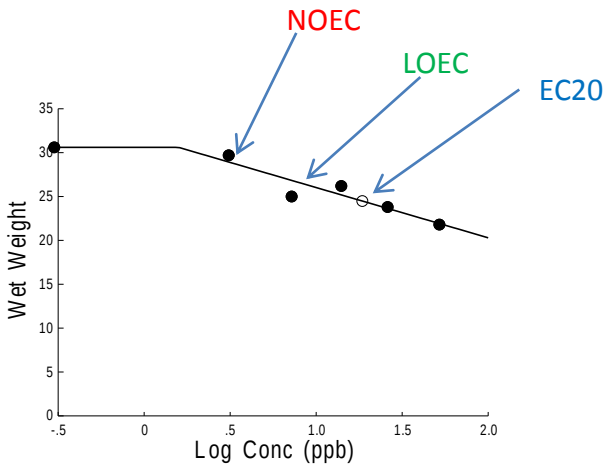
### Test 2 of 2




## Dry Weight (mg)

a

| | |
|---|---|
| TRAP Model Used | Piecewise Linear |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 177 |
| NOEC (ug/L) | 3.1 |
| LOEC (ug/L) | 7.2 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 5.6 ug/L (0.7 - 46.9) |
| EC50 (conf.limits) | 176 ug/L (9.9 - 3140) |
| Comments: | Dry Weight, 3 parameter model used |




## Wet Weight (mg)

b

| | |
|---|---|
| TRAP Model Used | Piecewise Linear |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 177 |
| NOEC (ug/L) | 3.1 |
| LOEC (ug/L) | 7.2 |
| EC05 (conf. limits) | 2.9 ug/L (0.4 - 24) |
| EC10 (conf. limits) | 5.4 ug/L (0.9 - 33) |
| EC20 (conf. limits) | 18.6 ug/L (4 - 87) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Wet Weight, 3 parameter model used |

# Chlorpyrifos

Figure 31a and 31b

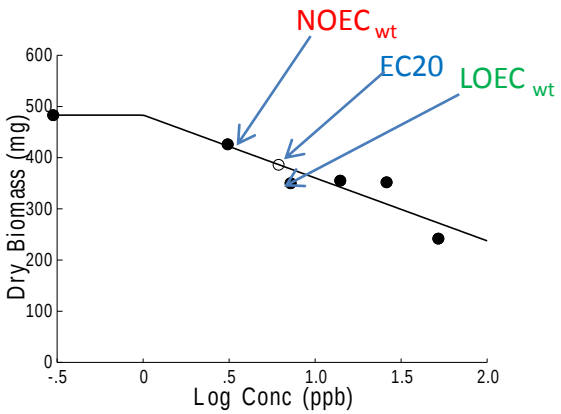
## Sheepshead Minnow (*Cyprinodon variegatus)*

## Ecotox Reference # 7769

## Test 2 of 2

### Dry Wt Biomass (mg)

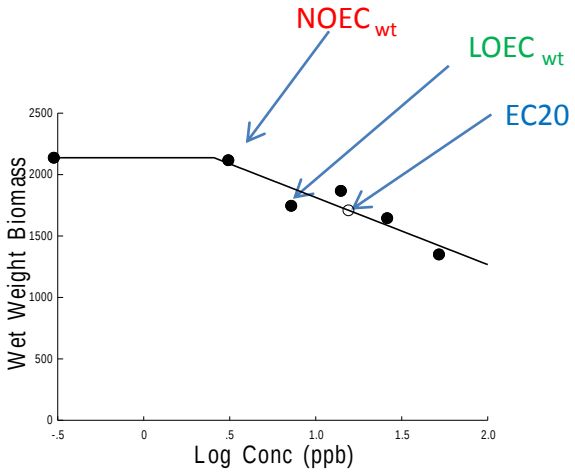
a




| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 177 |
| NOEC (ug/L) | 3.1 |
| LOEC (ug/L) | 7.2 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 6.1 ug/L (0.8 - 47.9) |
| EC50 (conf.limits) | 92.7 ug/L (9.1 - 944.1) |
| Comments: | Dry Weight Biomass, NOEC and LOEC values were based on dry weight NOEC and LOEC values , 3 parameter model used |

### Wet Wt Biomass (mg)

b




| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 177 |
| NOEC (ug/L) | 3.1 |
| LOEC (ug/L) | 7.2 |
| EC05 (conf. limits) | 4 ug/L (0.5 - 30) |
| EC10 (conf. limits) | 6.3 ug/L (1 - 38) |
| EC20 (conf. limits) | 15.5 ug/L (3.2 - 74) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Wet Weight Biomass, NOEC and LOEC values were based on wet weight NOEC and LOEC values , 3 parameter model used |

# Chlorpyrifos

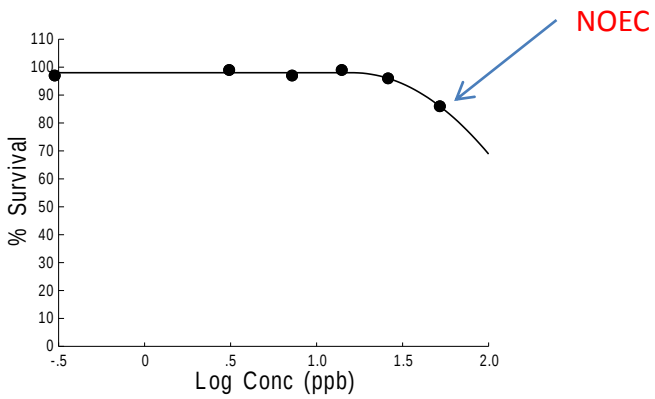
## Sheepshead Minnow (*Cyprinodon variegatus)*

Ecotox Reference # 7769

Test 2 of 2

% Survival

a



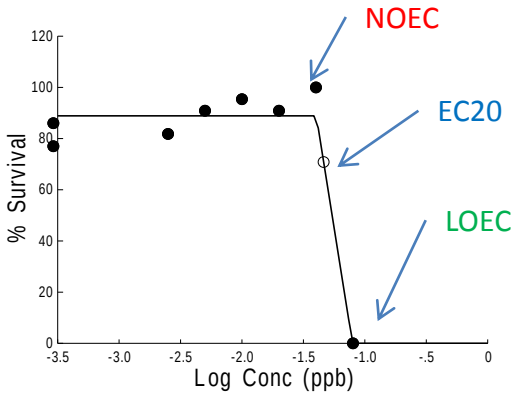

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 177 |
| NOEC (ug/L) | 52 |
| LOEC (ug/L) | >52 |
| EC05 (conf. limits) | 34 ug/L (25 - 47) |
| EC10 (conf. limits) | 47 ug/L (38 - 56) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | % Survival, 3 parameter model used |

# Chlorpyrifos

*Daphnia magna*

MRID # 41073401

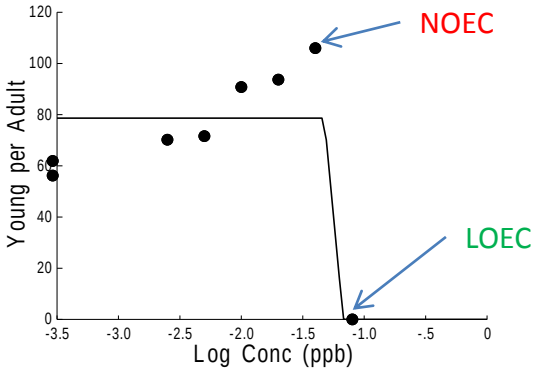
Figure 33a and 33b




% Survival

a

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 454 |
| NOEC (ug/L) | 0.04 |
| LOEC (ug/L) | 0.08 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 0.05 ug/L (no conf. limits) |
| EC50 (conf.limits) | 0.06 ug/L (no conf. limits) |
| Comments: | % Survival, 3 parameter model used |




Young per Adult

b

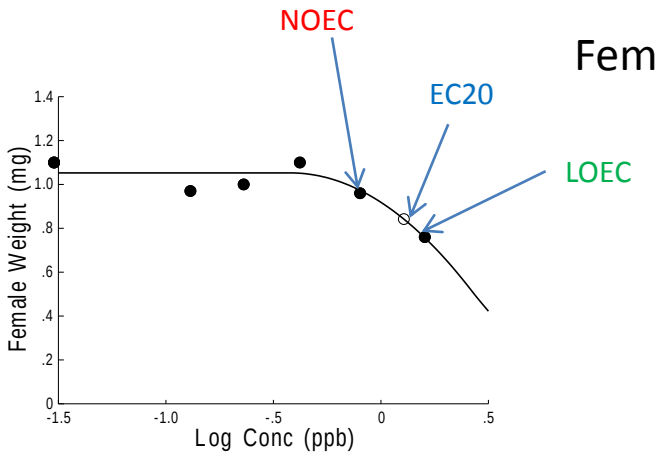
| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 454 |
| NOEC (ug/L) | 0.04 |
| LOEC (ug/L) | 0.08 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | 0.06 ug/L (no conf. limits) |
| Comments: | Young/Adult, insufficient dose response<br>3 parameter model used |

# Diazinon

Figure 34a and 34b

## Mysid (*Americamysis bahia*)

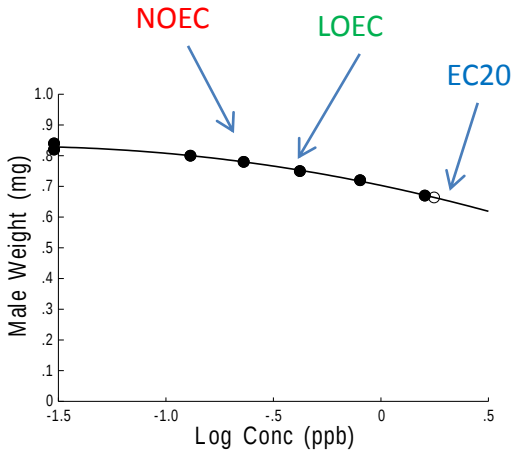
MRID # 44244801




### Female Weight (mg)

a

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.8 |
| LOEC (ug/L) | 1.6 |
| EC05 (conf. limits) | 0.7 ug/L (0.2 - 2.1) |
| EC10 (conf. limits) | 0.9 ug/L (0.4 - 2.0) |
| EC20 (conf. limits) | 1.3 ug/L (0.8 - 2.0) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Female Weight, 3 parameter model used |




### Male Weight (mg)

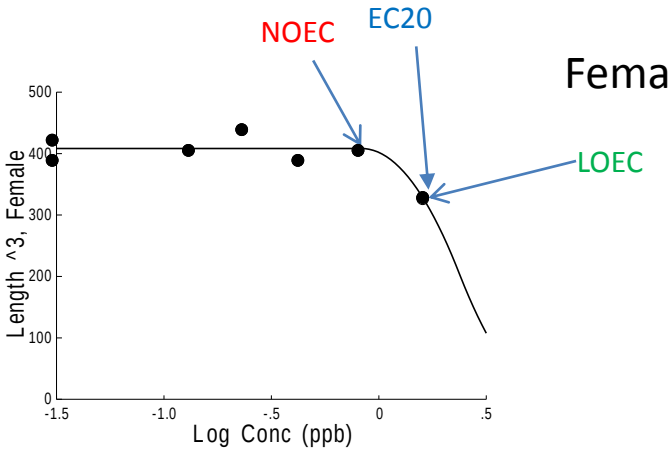
b

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.23 |
| LOEC (ug/L) | 0.42 |
| EC05 (conf. limits) | 0.2 ug/L (0.1 - 0.3) |
| EC10 (conf. limits) | 0.5 ug/L (0.3 - 0.7) |
| EC20 (conf. limits) | 1.8 ug/L (1.3 - 2.4) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Male Weight, use to estimate EC20 or lower only, 3 parameter model used |

# Diazinon

## Mysid (*Americamysis bahia*)

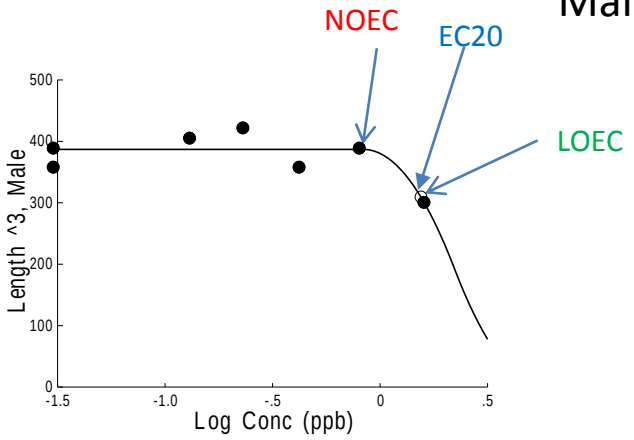
### MRID # 44244801




Female Length^3 (mm)

a

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.8 |
| LOEC (ug/L) | 1.6 |
| EC05 (conf. limits) | 1.2 ug/L (no conf. limits) |
| EC10 (conf. limits) | 1.3 ug/L (no conf. limits) |
| EC20 (conf. limits) | 1.6 ug/L (no conf. limits) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Female Length^3, 3 parameter model used |




Male Length^3 (mm)

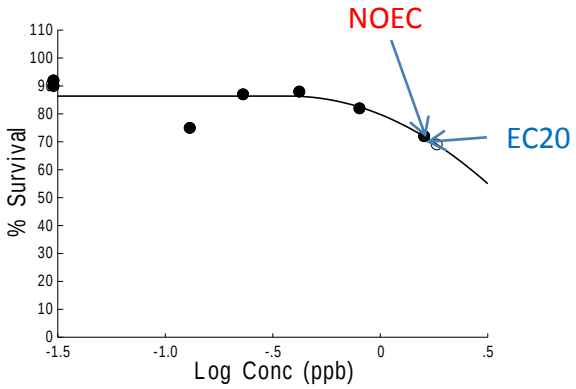
b

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.8 |
| LOEC (ug/L) | 1.6 |
| EC05 (conf. limits) | 1.1 ug/L (no conf. limits) |
| EC10 (conf. limits) | 1.3 ug/L (no conf. limits) |
| EC20 (conf. limits) | 1.6 ug/L (no conf. limits) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Male Length^3, 3 parameter model used |

# Diazinon

## Mysid (*Americamysis bahia*)

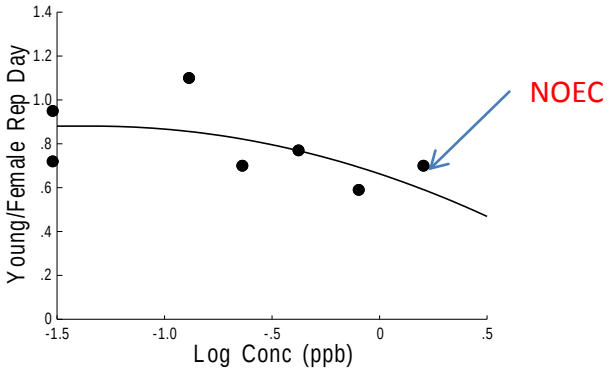
## MRID # 44244801




% Survival

a

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 1.6 |
| LOEC (ug/L) | >1.6 |
| EC05 (conf. limits) | 0.8 ug/L (0.1 - 5) |
| EC10 (conf. limits) | 1.2 ug/L (0.4 - 4) |
| EC20 (conf. limits) | 1.8 ug/L (0.6 - 6) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | % Survival, use to estimate EC20 or lower only, 3 parameter model used |




Young per Female Reproductive Day

b

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 1.6 |
| LOEC (ug/L) | >1.6 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Young/Female Rep Day, use to estimate EC20 or lower only, 3 parameter model used |

Figure 37a and 37b

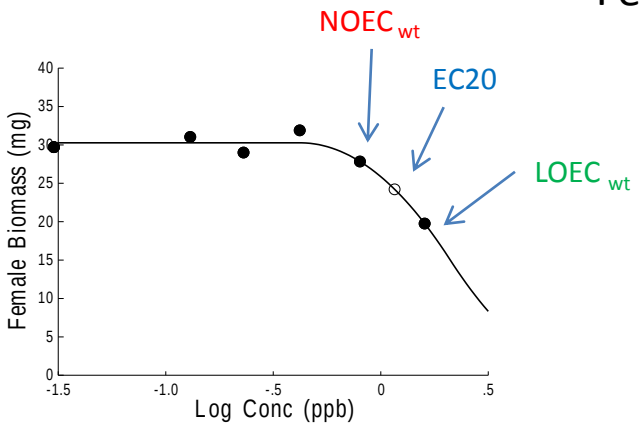
# Diazinon

## Mysid (*Americamysis bahia*)

MRID # 44244801

### Female Biomass (mg)

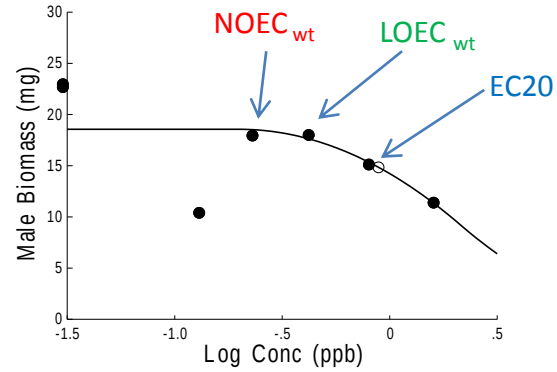
a




| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.8 |
| LOEC (ug/L) | 1.6 |
| EC05 (conf. limits) | 0.7 ug/L (0.4 - 1.2) |
| EC10 (conf. limits) | 0.9 ug/L (0.6 - 1.3) |
| EC20 (conf. limits) | 1.2 ug/L (0.9 - 1.5) |
| EC50 (conf.limits) | 2.1 ug/L (1.5 - 2.9) |
| Comments: | Female Biomass, NOEC and LOEC values based on female weight NOEC and LOEC values, 3 parameter model used |

### Male Biomass (mg)

b




| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.23 |
| LOEC (ug/L) | 0.42 |
| EC05 (conf. limits) | 0.4 ug/L (3E -3 - 60) |
| EC10 (conf. limits) | 0.6 ug/L (0.01 - 26) |
| EC20 (conf. limits) | 0.9 ug/L (0.1 - 10) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Male Biomass, NOEC and LOEC values based on male weight NOEC and LOEC values, 3 parameter model used |

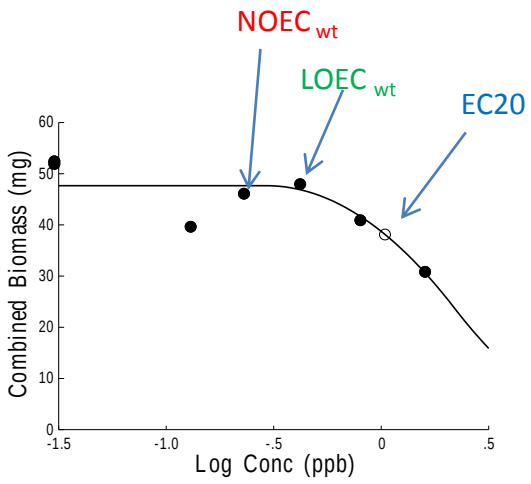
# Diazinon

## Mysid (*Americamysis bahia*)

MRID # 44244801

Combined Biomass (mg)

a




| | |
|---|---|
| TRAP Model Used | Threshold sigmoid |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 479 |
| NOEC (ug/L) | 0.23 |
| LOEC (ug/L) | 0.42 |
| EC05 (conf. limits) | 0.6 ug/L (0.1 - 3.3) |
| EC10 (conf. limits) | 0.7 ug/L (0.2 - 2.8) |
| EC20 (conf. limits) | 1.0 ug/L (0.4 - 2.5) |
| EC50 (conf.limits) | 2.2 ug/L (0.7 - 6.5) |
| Comments: | Combined Biomass, NOEC and LOEC values were based on male weight NOEC and LOEC values,(most sensitive), 3 parameter model used |

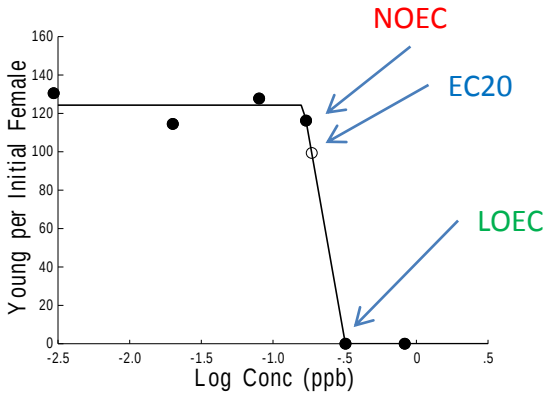
# Diazinon

*Daphnia magna*

MRID # 40782302

## Young per Initial Female

a

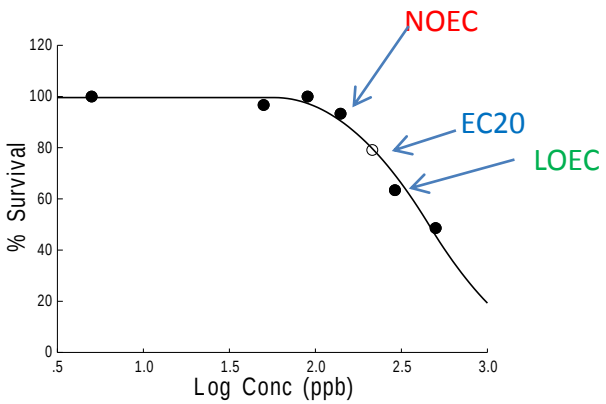



| | |
|---|---|
| TRAP Model Used | Piecewise Linear |
| TRAP Quality Value | 1 |
| AquaChronTox ID | 422 |
| NOEC (ug/L) | 0.17 |
| LOEC (ug/L) | 0.32 |
| EC05 (conf. limits) | 0.17 ug/L (no conf. limits) |
| EC10 (conf. limits) | 0.17 ug/L (no conf. limits) |
| EC20 (conf. limits) | 0.19 ug/L (no conf. limits) |
| EC50 (conf.limits) | 0.23 ug/L (no conf. limits) |
| Comments: | Young/Initial Female, only variable with raw data reported, 3 parameter model used |

# Diazinon

## Fathead Minnow (*Pimephales promelas)*

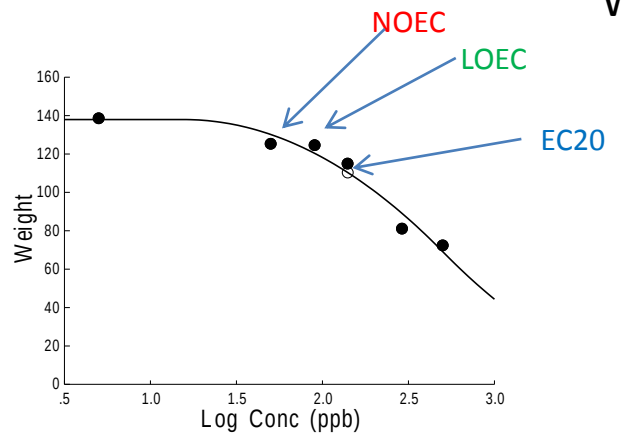
### Ecotox Reference # 15462




% Survival

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 28 |
| NOEC (ug/L) | 140 |
| LOEC (ug/L) | 290 |
| EC05 (conf. limits) | 111 ug/L (46 - 268) |
| EC10 (conf. limits) | 146 ug/L (72 - 294) |
| EC20 (conf. limits) | 214 ug/L (131 - 349) |
| EC50 (conf.limits) | 458 ug/L (341 - 615) |
| Comments: | % Survival, 3 parameter model used |




Weight (mg)

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 28 |
| NOEC (ug/L) | 50 |
| LOEC (ug/L) | 90 |
| EC05 (conf. limits) | 47 ug/L (10 - 216) |
| EC10 (conf. limits) | 74 ug/L (21 - 258) |
| EC20 (conf. limits) | 140 ug/L (58 - 341) |
| EC50 (conf.limits) | 502 ug/L (298 - 846) |
| Comments: | Weight, 3 parameter model used |

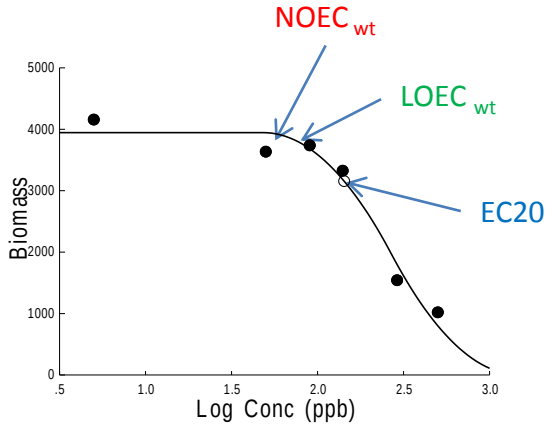
# Diazinon

## Fathead Minnow (*Pimephales promelas)*

Ecotox Reference # 15462

Biomass (mg)

a

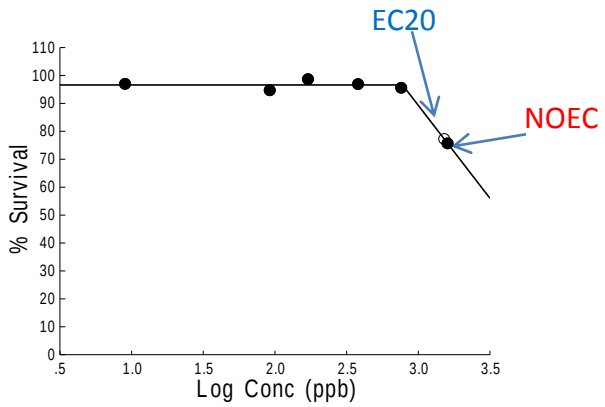



| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 28 |
| NOEC (ug/L) | 50 |
| LOEC (ug/L) | 90 |
| EC05 (conf. limits) | 83 ug/L (28 - 242) |
| EC10 (conf. limits) | 104 ug/L (43 - 249) |
| EC20 (conf. limits) | 143 ug/L (74 - 274) |
| EC50 (conf.limits) | 268 ug/L (183 - 392) |
| Comments: | Biomass, NOEC and LOEC values were based on weight NOEC and LOEC values, 3 parameter model used |

# Diazinon

## Fathead Minnow (*Pimephales promelas)*

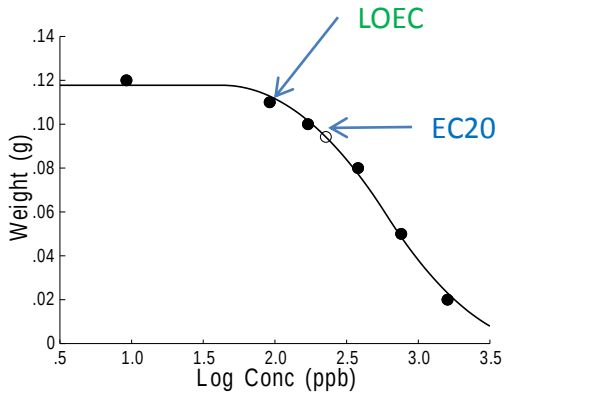
MRID# 40782301




% Survival

a

| | |
|---|---|
| TRAP Model Used | Piecewise Linear |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 423 |
| NOEC (ug/L) | 1600 |
| LOEC (ug/L) | >1600 |
| EC05 (conf. limits) | 1117 ug/L (no conf. limits) |
| EC10 (conf. limits) | 1282 ug/L (no conf. limits) |
| EC20 (conf. limits) | 1558 ug/L (no conf. limits) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx value |
| Comments: | % Survival, used to estimate EC20 or lower only, 3 parameter model used |




Weight (g)

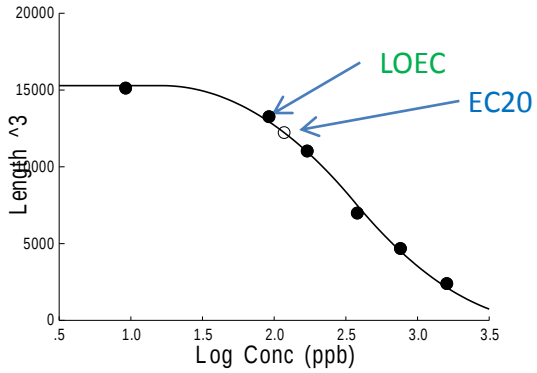
b

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 1 |
| AquaChronTox ID | 423 |
| NOEC (ug/L) | < 92 |
| LOEC (ug/L) | 92 |
| EC05 (conf. limits) | 99 ug/L (50 - 190) |
| EC10 (conf. limits) | 140 ug/L (81 - 240) |
| EC20 (conf. limits) | 230 ug/L (150 - 340) |
| EC50 (conf.limits) | 600ug/L (480 - 750) |
| Comments: | Weight, all treatments were significant relative to pooled controls, 3 parameter model used |

# Diazinon

## Fathead Minnow (*Pimephales promelas)*

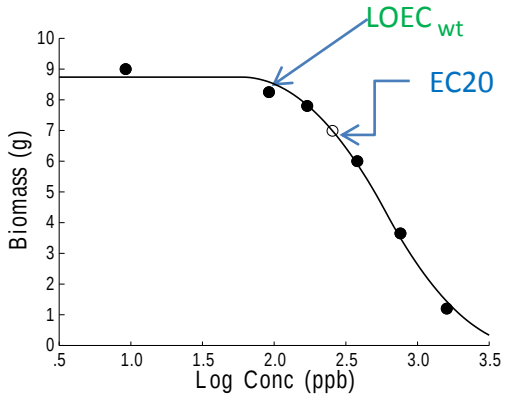
### MRID# 40782301




Length^3 (mm)

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 423 |
| NOEC (ug/L) | < 92 |
| LOEC (ug/L) | 92 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | 66 ug/L (38 – 115) |
| EC20 (conf. limits) | 117 ug/L (78-176) |
| EC50 (conf.limits) | 369 ug/L (293-464) |
| Comments: | Length^3, all treatments were significant relative to pooled controls, 3 parameter model used |




Biomass (g)

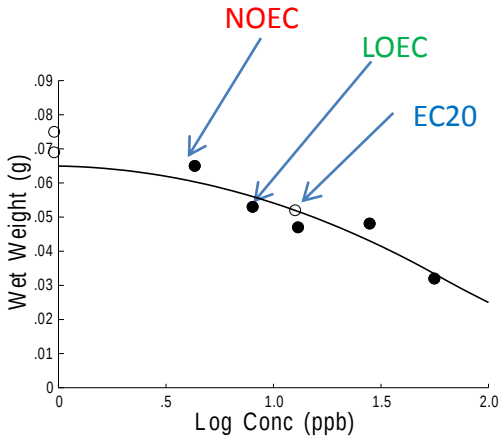
b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 423 |
| NOEC (ug/L) | < 92 |
| LOEC (ug/L) | 92 |
| EC05 (conf. limits) | 123 ug/L (60 - 250) |
| EC10 (conf. limits) | 170 ug/L (90 - 300) |
| EC20 (conf. limits) | 260 ug/L (170 - 390) |
| EC50 (conf.limits) | 600 ug/L (470 - 750) |
| Comments: | Biomass, *LOEC value was based on weight LOEC value, all treatments were significant relative to pooled controls, 3 parameter model used |

# Diazinon

## Sheepshead Minnow (*Cyprinodon variegatus)*

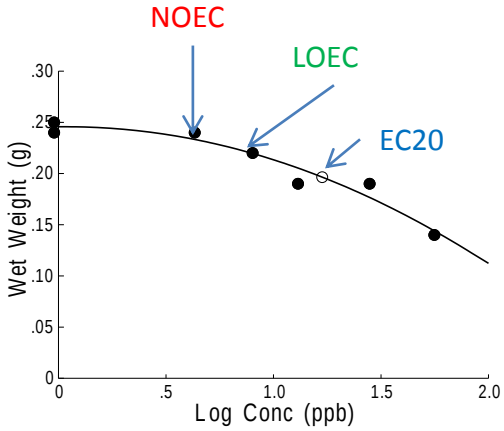
MR ID# 44244802




### Dry Weight (g)

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 4.3 |
| LOEC (ug/L) | 8.0 |
| EC05 (conf. limits) | 3.3 ug/L (0.5-20.8) |
| EC10 (conf. limits) | 5.7 ug/L (1.4-23.7) |
| EC20 (conf. limits) | 12.6 ug/L (5.1-30.8) |
| EC50 (conf.limits) | 59.4 ug/L (22.1-159.8) |
| Comments: | Dry Weight, 2 parameter model used |




### Wet Weight (g)

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 4.3 |
| LOEC (ug/L) | 8.0 |
| EC05 (conf. limits) | 4.3 ug/L (1.1 - 17.0) |
| EC10 (conf. limits) | 7.5 ug/L (2.6 - 22.3) |
| EC20 (conf. limits) | 16.8 ug/L (8.2 - 34.7) |
| EC50 (conf.limits) | 82.8 ug/L (40.9 - 167.4) |
| Comments: | Wet Weight, 3 parameter model used |

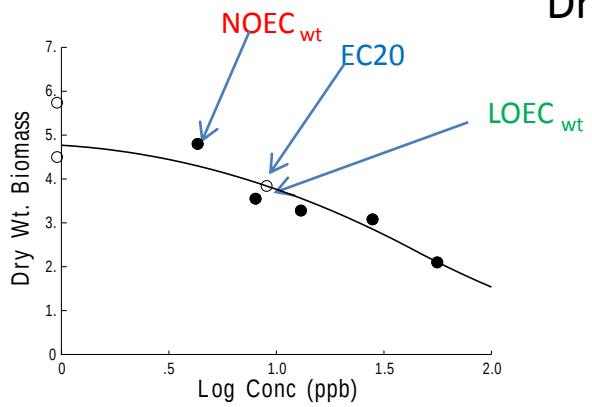
# Diazinon

## Sheepshead Minnow (*Cyprinodon variegatus)*

MR ID# 44244802

### Dry Wt Biomass (g)

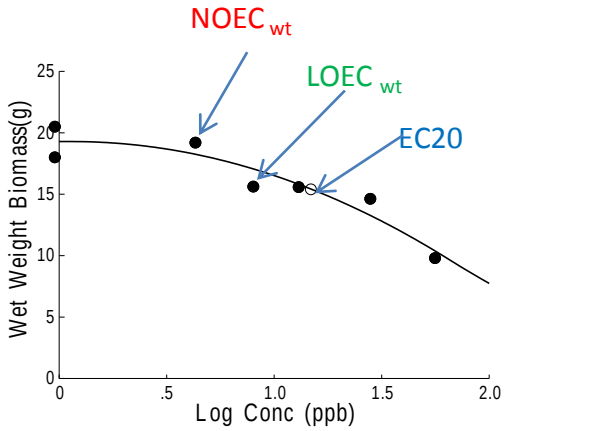
a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 4.3 |
| LOEC (ug/L) | 8.0 |
| EC05 (conf. limits) | 2.3 ug/L (0.3 - 20.8) |
| EC10 (conf. limits) | 4.1 ug/L (0.8 - 21.3) |
| EC20 (conf. limits) | 9.0 ug/L (3.2 - 25.6) |
| EC50 (conf.limits) | 42.8 ug/L (17.4 - 105) |
| Comments: | Dry Weight Biomass, NOEC and LOEC values were based on dry weight NOEC and LOEC, 2 parameter model used |

### Wet Wt Biomass (g)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 4.3 |
| LOEC (ug/L) | 8.0 |
| EC05 (conf. limits) | 4.1 ug/L (0.6 - 30.5) |
| EC10 (conf. limits) | 7.0 ug/L (1.4 - 34.8) |
| EC20 (conf. limits) | 14.8 ug/L (4.9 - 44.3) |
| EC50 (conf.limits) | 65.6 ug/L (27.1 - 158.9) |
| Comments: | Wet Weight Biomass, NOEC and LOEC values were based on wet weight NOEC and LOEC values,3 parameter model used |

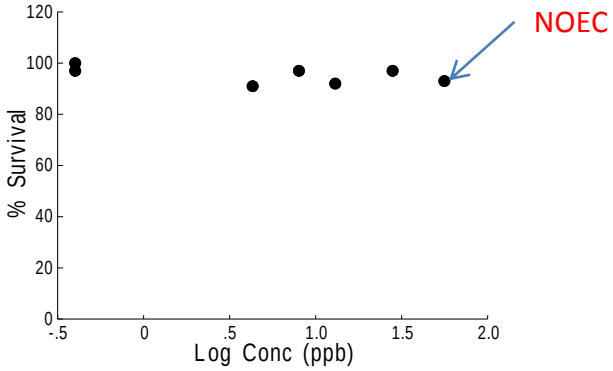
# Diazinon

## Sheepshead Minnow (*Cyprinodon variegatus)*

MR ID# 44244802

% Survival

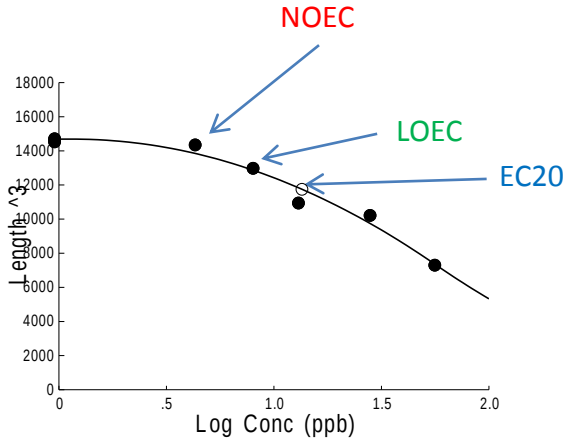
a




| TRAP Model Used | None |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 56 |
| LOEC (ug/L) | >56 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | % Survival, insufficient effects, Data does not support regression analysis |

Length^3 (mm)

b

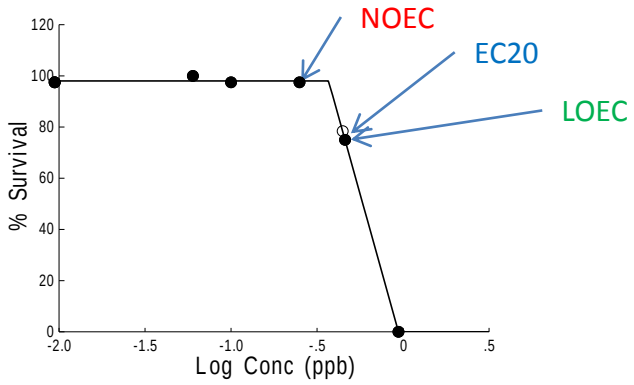



| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 480 |
| NOEC (ug/L) | 4.3 |
| LOEC (ug/L) | 8.0 |
| EC05 (conf. limits) | 4.0 ug/L (1.5-10.6) |
| EC10 (conf. limits) | 6.6 ug/L (3.0-14.6) |
| EC20 (conf. limits) | 13.5 ug/L (7.8-23.5) |
| EC50 (conf.limits) | 56.2 ug/L (37.9-83.5) |
| Comments: | Length^3, 3 parameter model used |

# Malathion

*Daphnia magna*

MRID # 41718401



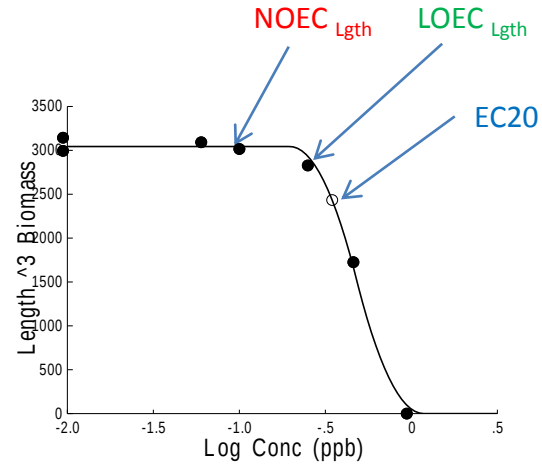

% Survival

a

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 404 |
| NOEC (ug/L) | 0.25 |
| LOEC (ug/L) | 0.46 |
| EC05 (conf. limits) | 0.39 ug/L (no conf. limits) |
| EC10 (conf. limits) | 0.41 ug/L (no conf. limits) |
| EC20 (conf. limits) | 0.45 ug/L (no conf. limits) |
| EC50 (conf.limits) | 0.59 ug/L (no conf. limits) |
| Comments: | % Survival, 3 parameter model used |

Length ^3 Biomass (mm)

b

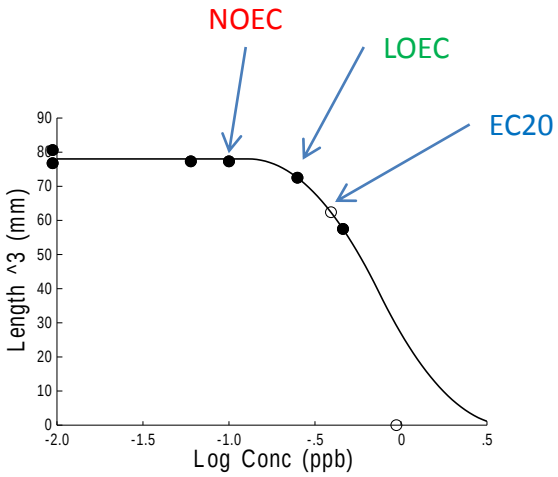



| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 404 |
| NOEC (ug/L) | 0.10 |
| LOEC (ug/L) | 0.25 |
| EC05 (conf. limits) | 0.26 ug/L (0.19 - 0.35) |
| EC10 (conf. limits) | 0.29 ug/L (0.23 - 0.38) |
| EC20 (conf. limits) | 0.35 ug/L (0.30 - 0.40) |
| EC50 (conf.limits) | 0.48 ug/L (0.44 - 0.52) |
| Comments: | Length ^3 Biomass, NOEC and LOEC values were based on length NOEC and LOEC values, 3 parameter model used |

# Malathion

*Daphnia magna*

MRID # 41718401



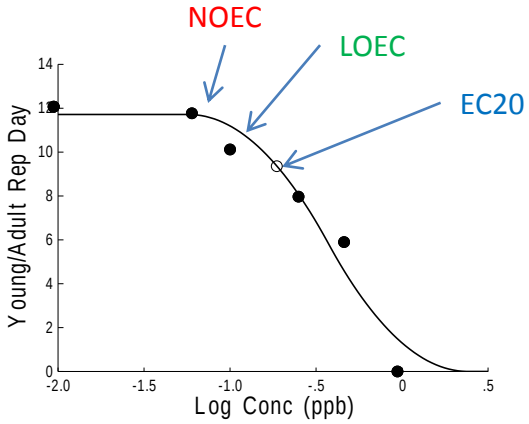

## Length ^3 (mm)

a

| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 404 |
| NOEC (ug/L) | 0.10 |
| LOEC (ug/L) | 0.25 |
| EC05 (conf. limits) | 0.23 ug/L (0.15 - 0.35) |
| EC10 (conf. limits) | 0.28 ug/L (0.21 - 0.38) |
| EC20 (conf. limits) | 0.39 ug/L (0.33 - 0.47) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length ^3, used as a surrogate growth measurement when weight was not reported, 3 parameter model used |

## Young per Adult Reproductive Day

b




| TRAP Model Used | Threshold sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 404 |
| NOEC (ug/L) | 0.06 |
| LOEC (ug/L) | 0.10 |
| EC05 (conf. limits) | 0.10 ug/L (0.03 - 0.42) |
| EC10 (conf. limits) | 0.13 ug/L (0.04 - 0.40) |
| EC20 (conf. limits) | 0.19 ug/L (0.08 - 0.41) |
| EC50 (conf.limits) | 0.37 ug/L (0.24 - 0.58) |
| Comments: | Young/ Adult Rep Day, 3 parameter model used |

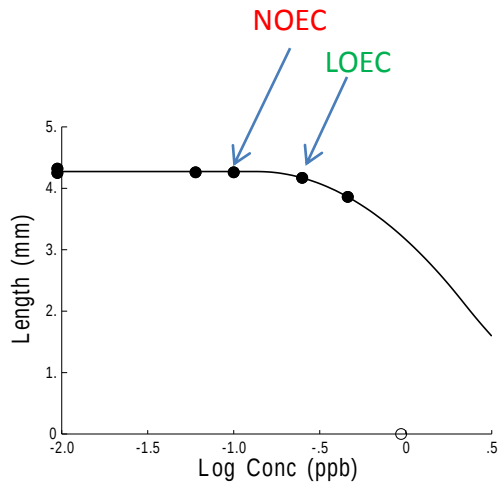
# Malathion

## *Daphnia magna*

MRID # 41718401

Length (mm)

a




| | |
|---|---|
| TRAP Model Used | Threshold sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 404 |
| NOEC (ug/L) | 0.10 |
| LOEC (ug/L) | 0.25 |
| EC05 (conf. limits) | 0.33 ug/L (0.26 - 0.40) |
| EC10 (conf. limits) | 0.47 ug/L (0.40 - 0.56) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length, 3 parameter model used |

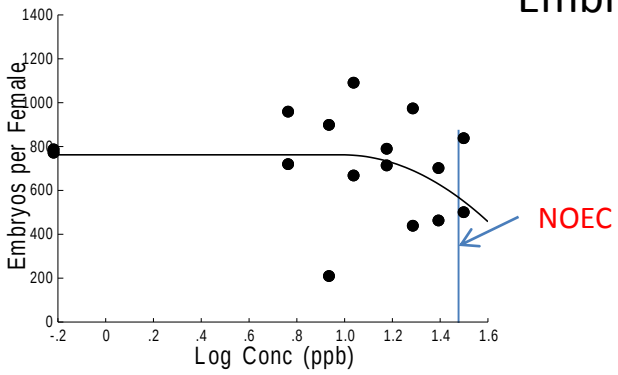
# Malathion

## Flagfish (*Jordanella floridae)*

## Ecotox Reference # 995

### Embryos per Female

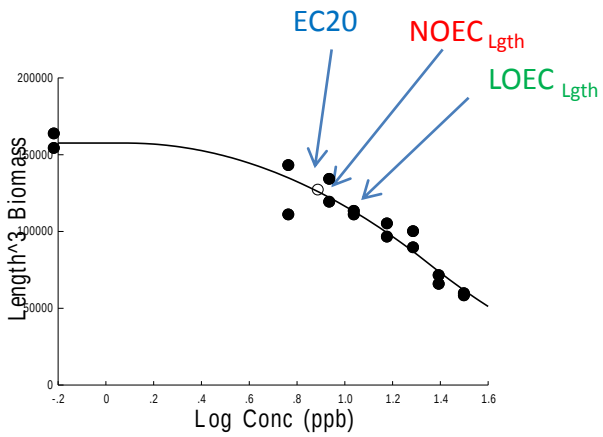
a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 87 |
| NOEC (ug/L) | 31.5 |
| LOEC (ug/L) | >31.5 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Embryos/Female, insufficient effects, 3 parameter model used |

### Length ^3 Biomass

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 87 |
| NOEC (ug/L) | 8.6 |
| LOEC (ug/L) | 10.9 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 7.7 ug/L (5.1 - 11.6) |
| EC50 (conf.limits) | 22.6 ug/L (18.4 - 27.7) |
| Comments: | Length ^3 Biomass, NOEC and LOEC values were based on Length NOEC and LOEC values, 3 parameter model used |

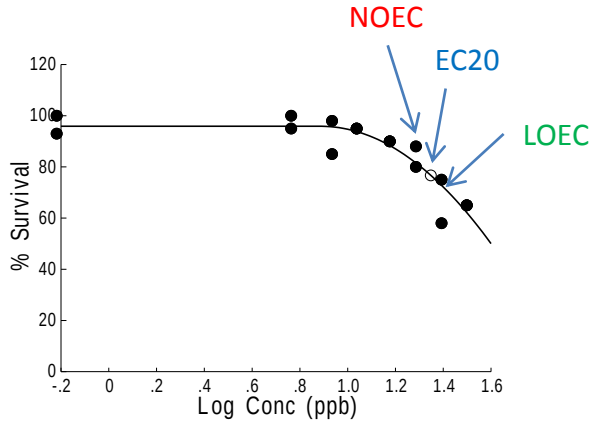
# Malathion

## Flagfish (*Jordanella floridae)*

### Ecotox Reference # 995

% Survival

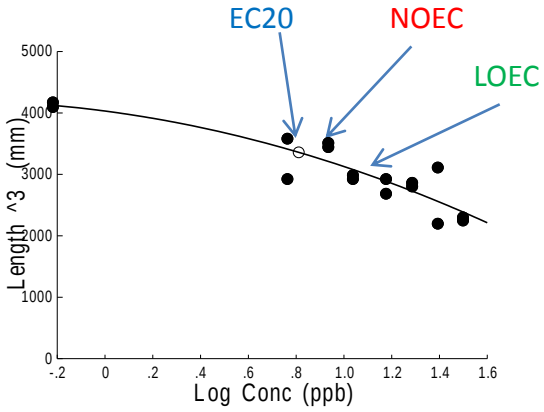
a




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 87 |
| NOEC (ug/L) | 19.3 |
| LOEC (ug/L) | 24.7 |
| EC05 (conf. limits) | 13.1 ug/L (8.6 - 19.9) |
| EC10 (conf. limits) | 16.3 ug/L (11.9 - 22.4) |
| EC20 (conf. limits) | 22.3 ug/L (18.3 - 27.1) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | % Survival, 3 parameter model used |

Length ^3 (mm)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 87 |
| NOEC (ug/L) | 8.6 |
| LOEC (ug/L) | 10.9 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 6.5 ug/L (1.3 - 33.2) |
| EC50 (conf.limits) | 46.0 ug/L (26.1 - 81.1) |
| Comments: | Length ^3, used as a surrogate growth measurement when weight was not reported, 3 parameter model used, |

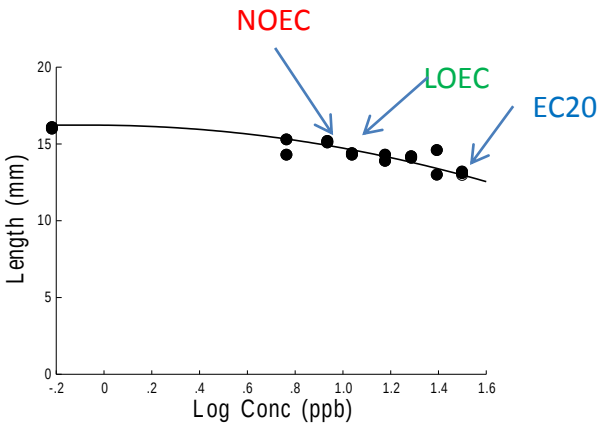
# Malathion

## Flagfish (*Jordanella floridae)*

## Ecotox Reference # 995

Length (mm)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 87 |
| NOEC (ug/L) | 8.6 |
| LOEC (ug/L) | 10.9 |
| EC05 (conf. limits) | 5.2 ug/L (2.1 - 13.0) |
| EC10 (conf. limits) | 11.0 ug/L (5.9 - 20.7) |
| EC20 (conf. limits) | 31.5 ug/L (20.1 - 49.4) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length, used to estimate EC20 or lower only,3 parameter model used |

# Malathion

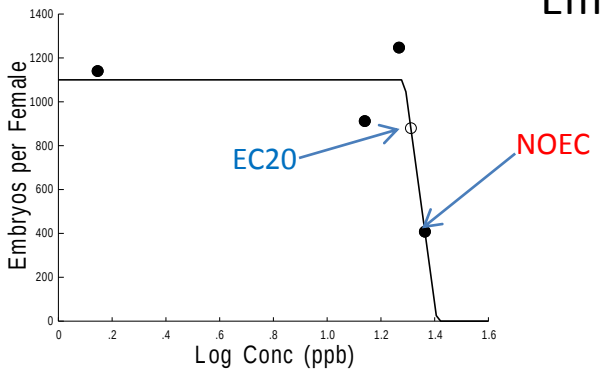
Figure 53a and 53b

## Flagfish (*Jordanella floridae)*

Ecotox Reference # 10687

### Embryos per Female

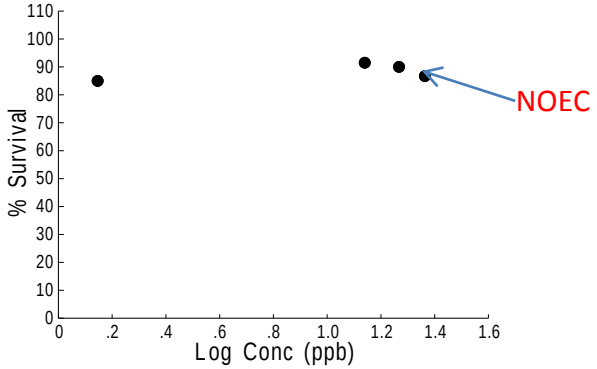
a




| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 88 |
| NOEC (ug/L) | 23.1 |
| LOEC (ug/L) | >23.1 |
| EC05 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC10 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC20 (conf. limits) | 20.5 ug/L (no conf. limits) |
| EC50 (conf.limits) | 22.3 ug/L (no conf. limits) |
| Comments: | Embryos per Female, 3 parameter model |

### % Survival

b




| TRAP Model Used | None |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 88 |
| NOEC (ug/L) | 23.1 |
| LOEC (ug/L) | >23.1 |
| EC05 (conf. limits) | Not Calculable |
| EC10 (conf. limits) | Not Calculable |
| EC20 (conf. limits) | Not Calculable |
| EC50 (conf.limits) | Not Calculable |
| Comments: | % Survival, insufficient effects, Data does not support regression analysis |

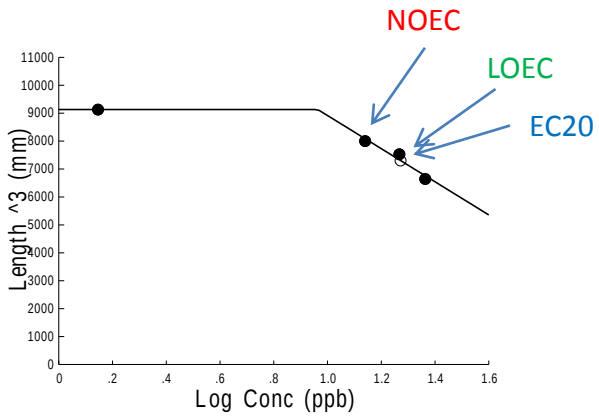
# Malathion

## Flagfish (*Jordanella floridae)*

## Ecotox Reference # 10687

### Length ^3 (mm)

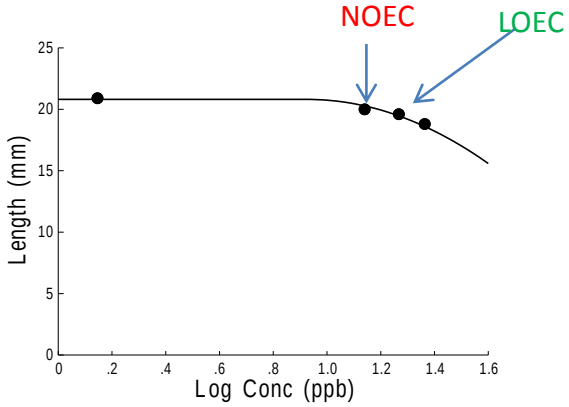
a




| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 88 |
| NOEC (ug/L) | 13.8 |
| LOEC (ug/L) | 18.5 |
| EC05 (conf. limits) | 11.0 ug/L (1.3 - 91.5) |
| EC10 (conf. limits) | 13.1 ug/L (2.5 - 69.5) |
| EC20 (conf. limits) | 18.7 ug/L (5.7 - 61.8) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length ^3, used as a surrogate growth measurement when weight was not reported, 3 parameter model used |

### Length (mm)

b




| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 3 |
| AquaChronTox ID | 88 |
| NOEC (ug/L) | 13.8 |
| LOEC (ug/L) | 18.5 |
| EC05 (conf. limits) | 16.8 ug/L (2.3 - 123.6) |
| EC10 (conf. limits) | 22.4 ug/L (5.6 - 90.1) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length, used for EC20 or lower only, 3 parameter model used |

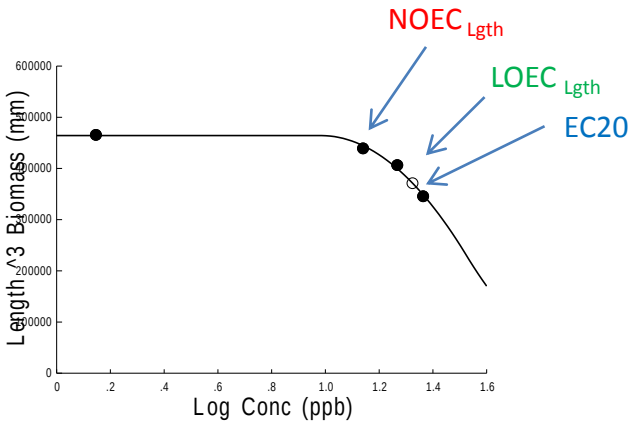
# Malathion

## Flagfish (*Jordanella floridae*)

## Ecotox Reference # 10687

Length ^3 Biomass (mm)

a



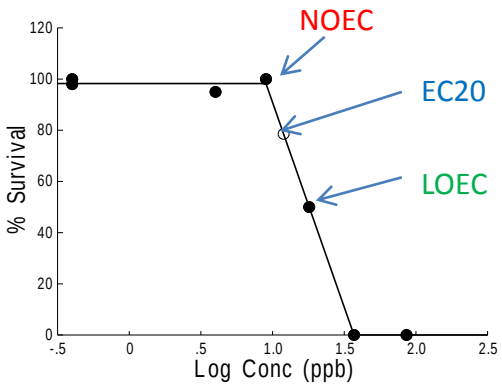

| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 2 |
| AquaChronTox ID | 88 |
| NOEC (ug/L) | 13.8 |
| LOEC (ug/L) | 18.5 |
| EC05 (conf. limits) | 14.2 ug/L (4.2 - 47.8) |
| EC10 (conf. limits) | 16.8 ug/L (7.0 - 40.3) |
| EC20 (conf. limits) | 21.1 ug/L (12.2 - 36.3) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length ^3 Biomass, used to estimate EC20 or lower only, NOEC and LOEC values were based on length NOEC and LOEC values,3 parameter model used |

Figure 56a and 56b

# Malathion

## Sheepshead Minnow (*Cyprinodon variegatus)*

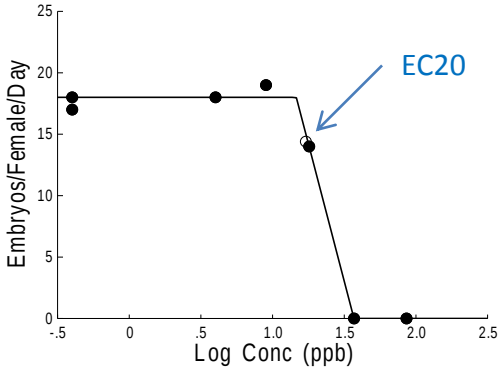
## Ecotox Reference # 5074




% Survival

a

| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 171 |
| NOEC (ug/L) | 9 |
| LOEC (ug/L) | 18 |
| EC05 (conf. limits) | 10 ug/L (9 - 11) |
| EC10 (conf. limits) | 10 ug/L (9 - 12) |
| EC20 (conf. limits) | 12 ug/L (11 - 13) |
| EC50 (conf.limits) | 18 ug/L (17 - 20) |
| Comments: | % Survival , 3 parameter model used |




Embryos /Female /Day

b

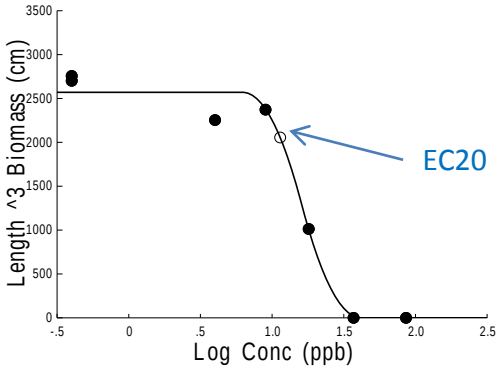
| TRAP Model Used | Piecewise Linear |
|---|---|
| TRAP Quality Value | 1 |
| AquaChronTox ID | 171 |
| NOEC (ug/L) | Not Reported |
| LOEC (ug/L) | Not Reported |
| EC05 (conf. limits) | 15 ug/L (no conf. limits) |
| EC10 (conf. limits) | 16 ug/L (no conf. limits) |
| EC20 (conf. limits) | 18 ug/L (no conf. limits) |
| EC50 (conf.limits) | 23 ug/L (no conf. limits) |
| Comments: | Embryos/Female/Day, 3 parameter model used |

Figure 57a and 57b

# Malathion

## Sheepshead Minnow (*Cyprinodon variegatus)*

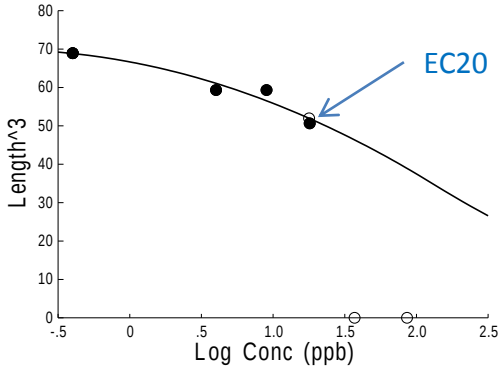
Ecotox Reference # 5074




### Length ^3 Biomass (cm)

a

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 171 |
| NOEC (ug/L) | Not Reported |
| LOEC (ug/L) | Not Reported |
| EC05 (conf. limits) | 8 ug/L (5 - 15) |
| EC10 (conf. limits) | 10 ug/L (6 - 16) |
| EC20 (conf. limits) | 11 ug/L (8 - 17) |
| EC50 (conf.limits) | 16 ug/L (13 - 20) |
| Comments: | Length ^3 Biomass, 3 parameter model used |




### Length ^3 (cm)

b

| TRAP Model Used | Threshold Sigmoid |
|---|---|
| TRAP Quality Value | 2 |
| AquaChronTox ID | 171 |
| NOEC (ug/L) | Not Reported |
| LOEC (ug/L) | Not Reported |
| EC05 (conf. limits) | 15 ug/L (115 - 20) |
| EC10 (conf. limits) | 16ug/L (13 - 21) |
| EC20 (conf. limits) | 18 ug/L (15 - 22) |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx value |
| Comments: | Length ^3, used as a surrogate growth measurement when weight was not reported, used to estimate EC20 or lower only, 3 parameter model used |

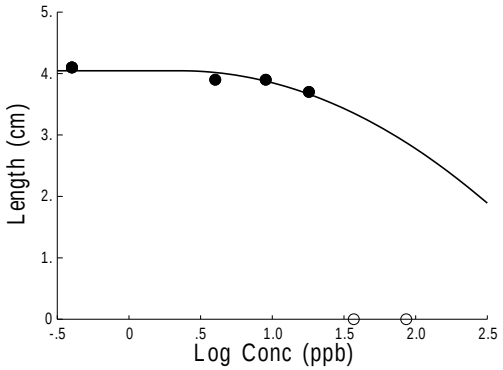
# Malathion

## Sheepshead Minnow (*Cyprinodon variegatus*)

## Ecotox Reference # 5074

Length (cm)

a




| | |
|---|---|
| TRAP Model Used | Threshold Sigmoid |
| TRAP Quality Value | 3 |
| AquaChronTox ID | 171 |
| NOEC (ug/L) | Not Reported |
| LOEC (ug/L) | Not Reported |
| EC05 (conf. limits) | 10 ug/L (2-60) |
| EC10 (conf. limits) | 19 ug/L (5-79) |
| EC20 (conf. limits) | Analysis does not support the estimation of this ECx |
| EC50 (conf.limits) | Analysis does not support the estimation of this ECx |
| Comments: | Length, insufficient effects, 3 parameter model used |