# Cal/Ecotox
# Toxicity Data for Pacific Treefrog (Hyla regilla)*


| Chemical | Tox Exposure | Endpoint Type | Endpoint Description | Endpoint Value | Note | Reference |
|---|---|---|---|---|---|---|
| AMMONIUM CHLORIDE | 0.2, 2.8, 7.3, 12.8, 24.9, 49.7, 102.9 mg/L NH4-N, mean measured concentration | TOX-MORT - toxicity benchmarks | 10-d LC50 for embryos | 30.3 | a | 1 |
| AMMONIUM CHLORIDE | 0.2, 2.8, 7.3, 12.8, 24.9, 49.7, 102.9 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | LOAEL for body weight and length and deformities | 24.9 | b | 1 |
| AMMONIUM CHLORIDE | 0.2, 2.8, 7.3, 12.8, 24.9, 49.7, 102.9 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | NOAEL for body weight and length and deformities | 12.8 | c | 1 |
| AMMONIUM NITRATE | 0.3, 3.3, 6.9, 13.3, 25.1, 50.9, 101.2 mg/L NH4-N, mean measured concentration | TOX-MORT - toxicity benchmarks | 10-d LC50 value for embryos | 25.0 | d | 1 |
| AMMONIUM NITRATE | 0.3, 3.3, 6.9, 13.3, 25.1, 50.9, 101.2 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | LOAEL for body weight and length | 6.9 | e | 1 |
| AMMONIUM NITRATE | 0.3, 3.3, 6.9, 13.3, 25.1, 50.9, 101.2 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | NOAEL for body weight and length | 3.3 | f | 1 |
| AMMONIUM SULFATE | 0.04, 2.6, 6.1, 11.7, 23.1, 45.4, 91.5 mg/L NH4-N, mean measured concentration | TOX-MORT - toxicity benchmarks | 10-d LC50 for embryos | 32.4 | g | 1 |
| AMMONIUM SULFATE | 0.04, 2.6, 6.1, 11.7, 23.1, 45.4, 91.5 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | LOAEL for body weight | 11.7 | h | 1 |
| AMMONIUM SULFATE | 0.04, 2.6, 6.1, 11.7, 23.1, 45.4, 91.5 mg/L NH4-N, mean measured concentration | TOX-REPRO - development | NOAEL for body weight | 6.1 | i | 1 |
| AZINPHOS-METHYL (GUTHION) | 0.01-9.67 mg/l | TOX-MORT - toxicity benchmarks | LC50 | 3.77 mg/l (95% CI; 1.82 - 4.22) | j | 2 |
| AZINPHOS-METHYL (GUTHION) | 0.01-9.67 mg/l | TOX-MORT - toxicity benchmarks | LOAEL | 9.67 mg/l | k | 2 |
| AZINPHOS-METHYL (GUTHION) | 0.01-9.67 mg/l | TOX-MORT - toxicity benchmarks | NOAEL | 1.78 mg/l | l | 2 |
| DIURON | 0, 0.5, 1.0, 3.8, 7.6, 14.5, 21.1, 29.1 mg/l | TOX-MORT - toxicity benchmarks | 14-d LC50 value; mean of 2 tests | 15.2 mg/l | m | 3 |
| DIURON | 0, 0.5, 1.0, 3.8, 7.6, 14.5, 21.1, 29.1 mg/l | TOX-Non-Repro-Sublethal - whole animal | lowest NOAEL based on body length/weight endpoints | 14.5 mg/l | n | 3 |
| NITRATE, SODIUM | 0.1, 24.8, 56.7, 111.0, 230.4, 470.4, 979.2, 2716 mg/L NO3-N, mean measured concentration | TOX-MORT - toxicity benchmarks | 10-d LC50 for embryos | 578.0 | o | 1 |
| NITRATE, SODIUM | 0.1, 24.8, 56.7, 111.0, 230.4, 470.4, 979.2, 2716 mg/L NO3-N, mean measured concentration | TOX-REPRO - development | LOAEL for body weight and length | 111.0 | p | 1 |
| NITRATE, SODIUM | 0.1, 24.8, 56.7, 111.0, 230.4, 470.4, 979.2, 2716 mg/L NO3-N, mean measured concentration | TOX-REPRO - development | NOAEL for body weight and length | 56.7 | q | 1 |

***Notes***

a Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=12125-02-9; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR; static-renewal tests according to ASTM FETAX assay, with modifications

b Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=12125-02-9; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; static-renewal tests according to ASTM FETAX assay, with modifications

c Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=12125-02-9; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=N; static-renewal tests according to ASTM FETAX assay, with modifications

d Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=6484-52-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR; static-renewal tests according to ASTM FETAX assay, with modifications

e Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=6484-52-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; static-renewal tests according to ASTM FETAX assay, with modifications

f Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=6484-52-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=N; static-renewal tests according to ASTM FETAX assay, with modifications

g Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7783-20-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR; static-renewal tests according to ASTM FETAX assay, with modifications

h Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7783-20-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; static-renewal tests according to ASTM FETAX assay, with modifications

i Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7783-20-2; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=N; static-renewal tests according to ASTM FETAX assay, with modifications

j Tadpole; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=86-50-0; N=10 tadpoles/replicate; 2 replicates/dose; 5 doses; Age=3 wk; Tox Exp Tech=waterborne; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=Y; concentration based on measured active ingredient; technical grade Guthion used; static renewal test; see citation for toxicity of Guthion 2S

k Tadpole; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=86-50-0; N=10 tadpoles/replicate; 2 replicates/dose; 5 doses; Age=3 wk; Tox Exp Tech=waterborne; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=Y; concentration based on measured active ingredient; technical grade Guthion used; static renewal test

l Tadpole; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=86-50-0; N=10 tadpoles/replicate; 2 replicates/dose; 5 doses; Age=3 wk; Tox Exp Tech=waterborne; Tox Exp Dur=8 d; Tox Study Dur=8 d; Tox Stat Sig=Y; concentration based on measured active ingredient; technical grade Guthion used; static renewal test

m Tadpole; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=330-54-1; N=8/replicate; 3 replicates/dose; Age=12 - 24 d; Tox Exp Tech=waterborne; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=NR

n Tadpole; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=330-54-1; TOX - Dose-Response Data Format=DR Figure; N=8/replicate; 3 replicates/dose; Age=12 - 24 d; Tox Exp Tech=waterborne; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=Y

o Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7631-99-4; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR; static-renewal tests according to ASTM FETAX assay, with modifications

p Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7631-99-4; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; static-renewal tests according to ASTM FETAX assay, with modifications

q Embryo; Lab; NR; Species - California (R)=Hyla regilla; TOX - Chemical=7631-99-4; TOX - Dose-Response Data Format=DR Table; N=10/replicate; 3 replicates/dose; Tox Exp Tech=waterborne; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=N; static-renewal tests according to ASTM FETAX assay, with modifications

***References***

1 Schuytema, G.S. and A.V. Nebeker. 1999. Comparative effects of ammonium and nitrate compounds on Pacific treefrog and African clawed frog embryos. Arch. Environ. Contam. Toxicol. 36:200-206.

2 Schuytema, G.S., A.V. Nebeker and W.L. Griffis. 1995. Comparative Toxicity of Guthion and Guthion 2S to Xenopus laevis and Pseudacris regilla tadpoles. Bull. Environ. Contam. Toxicol. 54:382-388.

3 Schuytema, G.S. and A.V. Nebeker. 1998. Comparative toxicity of diuron on survival and growth of Pacific treefrog, bullfrog, red-legged frog and African clawed frog embryos and tadpoles. Arch. Environ. Contam. Toxicol. 34:370-376.

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