

Determining fish availability to the angling public following electrical immobilization and sedation by benzocaine and eugenol

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La Crosse, WI**

**Aquaculture Drug Approval Coordination Workshop
June 9-11, 2009**

UMESC Benzocaine & Eugenol

Zero hour withdrawal sedative most likely not going to be approved by the FDA

Pursue approval of an immediate release sedative

Immediate release based on a recovery period where fish would not feed; not available to angling

During the recovery period, drug residues deplete to a safe level

UMESC Benzocaine & Eugenol

Study design for Trial 1

- ✓ Negative control (no shock, no sedation)
 - ✓ Positive control (shock, no sedation)
- ✓ Benzocaine sedation (no shock, BZ sedation)
- ✓ Eugenol sedation (no shock, EU sedation)
 - ✓ Shock followed by BZ sedation
 - ✓ Shock followed by EU sedation

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Study design for Trail 1

Rainbow and Brown trout

Walleye and Yellow perch

Bluegill and Channel catfish

2-3 fish per aquarium, 15 chemical sedation aquaria

Backpack shocker

100 mg/L BZ, 20 mg/L EU

Monitored for feeding behavior for 24 h with a video recording system

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Study design for Trial 2

Long-term sedation with rainbow trout

Shocked then 25 mg/L BZ or 5 mg/L EU

45 min exposure

Monitored for feeding behavior for 24 h

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Accomplishments

Discussions with FDA to develop the experimental design

3 students hired to conduct the study

Dr. Kim Fredricks, Viterbo University

Exposures underway