I-011741-P-0145-EF

USDI Fish and Wildlife Service
Attention: Marilyn Blair
Branch Chief
4050 Bridger Canyon Road
Bozeman, MT 59715

Re: Effectiveness technical section complete

Dear Dr. Blair:

Based upon the information contained in I-011741-P-0078-EF, I-011741-P-0080-EF, I-011741-P-0083-EF, I-011741-P-0084-EF, I-011741-P-0129-EF (P-0116), and I-011741-P-0130-EF (P-0119), we consider the effectiveness technical section to be complete. The technical section is complete for the use of eugenol immersion solution for the sedation of saltwater finfish to a handleable condition. The low end of the dose range, as supported by effectiveness data, will be 25 mg eugenol/L for saltwater salmonid finfish and 30 mg eugenol/L for saltwater nonsalmonid finfish.

EFFECTIVENESS

This technical section complete letter represents our finding that studies AQS20E-14-SEA-EFF-01a and AQS20E-14-SEA-EFF-01b (Florida Pompano), AQS20E-14-SEA-EFF-02 (Cobia), AQS20E-14-SEA-EFF-03 (Black Seabass), AQS20E-14-SEA-EFF-05 (Steelhead Trout), AQS20E-14-SEA-EFF-07(Yellowtail), and AQS20E-14-SEA-EFF-08 (White Seabass) provide substantial evidence of effectiveness and are complete and accepted.

We have the following comment:

1. The sablefish study, AQS20E-14-SEA-EFF-09 (P-0145), has been accepted and reviewed; however, because the study failed to support effectiveness as specified in the study protocol, it may not be used as substantial evidence of effectiveness for the use of eugenol to sedate saltwater finfish to a handleable condition.
2. In the submission, Table 1 [Summary of AQUI-S 20E studies conducted in seawater] provided a list of studies conducted to date. Study 14-SEA-EFF-06 is missing from the Table. In recent conversations with you, we were informed that a study in red drum was initiated July 2017, and fish were exposed to 80 mg eugenol/L. There was an error in dose verification or labeling of samples and a decision was made to not submit the study to CVM for review. Because the fish were exposed to a higher dose than the effective dose and this dose would be outside the proposed label range, we did not need the study to complete review of the technical section. However, all studies initiated under a pivotal protocol should still be submitted to us. Please submit a summary of the data and describe what happened to the samples and why the study results were not analyzed and submitted. Study 14-SEA-EFF-06 should be submitted as a "P" submission to INAD 011741.

DRAFT LABELING

We reviewed the sections of the draft labeling related to effectiveness. Please revise the labeling per the text below. CVM may request additional revisions after reviewing the other technical sections.

> INDICATION: For sedation of saltwater finfish to a handleable condition.
>
> DIRECTIONS FOR USE: Add the correct amount of [proprietary name] (eugenol immersion solution) in a static bath to achieve the desired target dose (25-40 mg eugenol/L for saltwater salmonid finfish; 30-40 mg eugenol/L for saltwater nonsalmonids), and immerse fish in the solution until they become sedated to a handleable condition. If necessary, provide supplemental aeration to maintain adequate dissolved oxygen concentration.
>
> Under tested conditions, most saltwater finfish species were sedated to a handleable condition within 5 minutes (mean approximately 45 seconds to 2 minutes) when exposed to the low end of the dose range. Under tested conditions, saltwater finfish recovered on average in 4 to 7 minutes when exposed to the low end of the dose range. Some fish species, including sablefish and elasmobranchs, may take longer than 5 minutes to become sedated to a handleable condition.

FREEDOM OF INFORMATION (FOI) SUMMARY

A copy of the draft Effectiveness section of the FOI Summary is enclosed. Please review the FOI Summary section for accuracy and notify us if you find any errors.

ALL FURTHER INFORMATION (AFI)

The "all further information" provided in this submission is acceptable. You do not need to re-submit the information provided in this submission again.

If you submit correspondence relating to this letter, your correspondence should reference the date and the principal submission identifier at the top of this letter. If you have any questions or comments, please contact me at 240-402-0819 or at crystal.groesbeck@fda.hhs.gov. You may also contact Dr. Jennifer Matysczak, Leader, Aquaculture Drugs Team, at 240-402-0558 or at jennifer.matysczak@fda.hhs.gov.

Sincerely,

{see appended electronic signature page}
Crystal Groesbeck, Ph.D.
Director, Division of Therapeutic
Drugs for Food Animals
Office of New Animal Drug Evaluation
Center for Veterinary Medicine

Enclosure:
Draft FOI summary effectiveness section

Electronic Signature Addendum for Submission ID

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Signing Authority (Role)	Letter Date
Crystal Groesbeck (Division Director)	9/30/2020

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