Accepted Manuscript

Effects of various levels of dietary copper supplementation with copper sulfate and copper hydroxychloride on Pacific white shrimp Litopenaeus vannamei performance and microbial communities

Aquaculture

Yangen Zhou, Dongdong Zhang, Eric Peatman, Melanie A. Rhodes, Jun Liu, D. Allen Davis

PII: S0044-8486(17)30760-3

DOI: doi: 10.1016/j.aquaculture.2017.04.016

Reference: AQUA 632612

To appear in: aquaculture

Received date: 22 August 2016 Revised date: 30 March 2017 Accepted date: 18 April 2017

Please cite this article as: Yangen Zhou, Dongdong Zhang, Eric Peatman, Melanie A. Rhodes, Jun Liu, D. Allen Davis, Effects of various levels of dietary copper supplementation with copper sulfate and copper hydroxychloride on Pacific white shrimp Litopenaeus vannamei performance and microbial communities. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Aqua(2017), doi: 10.1016/j.aquaculture.2017.04.016

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Effects of Various Levels of Dietary Copper Supplementation with Copper Sulfate and Copper Hydroxychloride on Pacific White Shrimp *Litopenaeus vannamei* Performance and Microbial Communities

Yangen Zhou^{1, #}, Dongdong Zhang^{2, #}, Eric Peatman², Melanie A. Rhodes², Jun Liu³, D. Allen Davis^{2,*}

¹ Key Laboratory of Mariculture, Ministry of Education, Ocean University of China, 5 Yushan Road, Qingdao, 266003, China

² School of Fisheries, Aquaculture and Aquatic Sciences, Auburn University, 203 Swingle Hall,

Auburn, Alabama 36849–5419 USA

³ School of Animal Science and Nutritional Engineering, Wuhan Polytechnic University, 63

Xuefunanlu, Changqinggongyuan, Wuhan, 430070, China

Running head: Various levels of dietary two copper source in shrimp diets

*Correspondence: D. Allen Davis, School of Fisheries, Aquaculture and Aquatic Sciences, 203 Swingle Hall, Auburn University, Auburn, AL 36849-5419, USA. E-mail: davisda@auburn.edu

^{*}These authors contribute equally to this article.

Download English Version:

https://daneshyari.com/en/article/5539411

Download Persian Version:

https://daneshyari.com/article/5539411

Daneshyari.com