

عنوان مقاله:

Research Article: Determination of median lethal concentration (LC₅₀) and histopathological effects of malachite green on *Oncorhynchus mykiss*

محل انتشار:

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خلاصه مقاله:

The purpose of this study was to determine the lethal concentration (LC₅₀-96 h) of malachite green on rainbow trout and also the histology effects of this substance on the liver, gills and kidney. With increasing concentrations of malachite green, rainbow trout mortality increased during the period of 24 to 96 hours. Twenty four hour lethal concentration (LC₅₀-24 h) of malachite green on *O. mykiss* is 32.28 mg L⁻¹. Forty eight hour lethal concentration (LC₅₀-48 h) of malachite green is 16.32 mg L⁻¹, and 72-hour lethal concentration (LC₅₀-72 h) of malachite green is 2.52 mg L⁻¹. All lethal concentrations at 72 hours showed a clear reduction compared to 24 and 48 hours. The median lethal concentration of malachite green (LC₅₀-96 h) of rainbow trout was 0.83 mg L⁻¹ during four consecutive days (96 hours). On the other hand, malachite green showed destructive effects on liver, gills and kidney tissue of rainbow trout, and these changes were more intense with increasing concentration of malachite green. Therefore, due to the grading of toxicity is determined by the amount of LC₅₀-96 h and also observing tissue effects exposed to this substance, the malachite green is considered highly toxic to rainbow trout. For this reason, there are always concerns about the possibility of its transmission to consumers or humans; therefore, regarding to this matter that using this substance in the fish farms has been prohibited by Iran Veterinary Organization, it is necessary to remove malachite green from the .list of drugs used in fish breeding and provide the other safe drugs

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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