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“AVISHIT”, A new herbal drug for substitution of malachite green

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Fungal pollution has induced high economic losses especially in trout hatchery. Malachite green is the most effective chemical for treatment and prophylaxis of fungal disease but it has many disorders for environment and public health. Herbal drug like “AVISHIT” derived from *Zataria multiflora* (Avishan-e-shirazi) have good effects for aquatic fungal prevention and control. About 16 kg trout eggs from three to four years old *Oncorhynchus mykiss* brooders were evaluated to assess the capability of “AVISHIT” in control of fungal pollution. During two years in nine stages, the effects of six doses of this essence (1, 5, 10, 25, 50 and 100 ppm) were evaluated daily with three repetitions until the eyed egg stage (about 18-20 days). Besides, under the equal condition, the positive control group was treated with one ppm malachite green and the negative control group assessed without any drugs. Physical and chemical parameters like pH, temperature and dissolved oxygen were determined during this survey. MIC (Minimum Inhibitory Concentration) technique is done for in vitro assay fungicide potentially. In GP agar media, *Saprolegnia parasitica* and *Fusarium solani* were isolated from fungal eggs. MIC result of “AVISHIT” against *Saprolegnia* was 0.9 and against *Fusarium* was 1.6 ppm. The measure of water physical and chemical factors before and after treatment weren't significant. “AVISHIT” especially in the doses of 25, 50 and 100 ppm had significant difference with negative control group ($p < 0.05$) and created suitable inhibition against water fungi. The results of this survey covered characterization of fungicide drugs. High safety of “AVISHIT” for environment and public health, friendly usage and cost benefit are better indications when compared with malachite green.

Biography

Sharif Rohani M is currently working in Iranian Fisheries Science Research Institute, Iran.

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