


The efficacy of hydrogenperoxide for the treatment of farmed Atlantic salmon, *Salmo salar* L. infested with sealice (Copepoda: Caligidae)

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Abstract

The lethal effect of hydrogenperoxide in treating sealice, mainly *Lepeophtheirus salmonis*, was examined in laboratory in vitro and on farmed Atlantic salmon, *Salmo salar*. Although all preadult and adult lice in vitro were inactive at the end of a 20 min treatment with 1500 ppm hydrogenperoxide at 10 °C, 35% of lice had recovered 1 h and 85% at 24 h post-exposure. Chalimi were similarly affected but 90–100% recovered. The proportion of inactive mobile lice was positively related to concentration of hydrogenperoxide and water temperature. The reduction in mobile lice numbers on salmon in 20-min cage treatments at 6.5 °C varied from 43 to 100% depending on louse developmental stage, with greatest reduction in numbers of preadults. All lice collected from the surface water of treated cages at temperatures of 6.5 °C (n = 29) and 11.5 °C (n = 189) were inactive but recovery commenced within 30 min and 90–97% of collected lice were active 12 h post-treatment. There was no evidence that recovered lice resettled on treated fish: numbers of mobile lice declined and remained low after three consecutive treatments. However, the search continues for more effective and safer medicines for the control of lice on farmed Atlantic salmon.

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