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INTEROX® PARAMOVE® 50
Hydrogen Peroxide
Acaricide

SOLUTION

For Treatment of Sea Lice on Atlantic Salmon Reared in Marine Aquaculture Sites

ACTIVE INGREDIENT:
Hydrogen Peroxide --- 50.0%

RESTRICTED

REGISTRATION NO. 31393
PEST CONTROL PRODUCTS ACT



DANGER
POISON

DANGER – CORROSIVE TO EYES
DANGER – SKIN IRRITANT

KEEP OUT OF REACH OF CHILDREN

READ THE LABEL BEFORE USING



Manufactured and Distributed by:
Solvay Chemicals Inc.
1130 Independence Parkway South, La Porte, TX 77571 USA
1-800-SOLVAYC
(1-800-765-8292)

Net Contents: XXXX L

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.

NATURE OF RESTRICTION: Only to be applied by individuals who are provincially certified and trained in the application of this product and who hold a pesticide applicator certificate or license recognized by the provincial/territorial pesticide regulatory agency where the application occurs.

USE RESTRICTIONS:

Interox® Paramove® 50 is effective for the removal of sea lice (*Lepeophtheirus* spp. and *Caligus* spp.) in farmed Atlantic salmon. Interox Paramove 50 temporarily paralyses sea lice, causing them to fall off the host. Interox Paramove 50 also reduces egg string viability. Interox Paramove 50 does not remove all growth stages; therefore it should not be used prophylactically. It should be used to treat fish infested with post-chalimus growth stages and before serious skin damage is evident. Some sea lice may recover and re-attach to hosts following treatment. Repeat treatments may be necessary.

This product is to be used only in the manner authorized; consult provincial pesticide regulatory authorities about use permits which may be required.

The restricted uses of Interox Paramove 50 may be subject to other legislative requirements such as those under the *Fisheries Act*.

DIRECTIONS FOR USE:

Interox Paramove 50 is administered as an external bath treatment by either using wellboats or completely enclosed tarpaulins. Treat only when thresholds are reached as directed by a veterinarian. Interox Paramove 50 must be added as quickly as possible, while avoiding splashing, to reach the target concentration within the shortest timeframe. Fish to be treated should be starved for at least 24 hours pre-treatment. Do not administer to fish weighing less than 200 g mean bodyweight or fish exhibiting signs of gill damage. Steps should be taken to remove lice floating on the water after treatment to prevent re-infestation. When a wellboat is used for treatment, it is recommended that measures be taken to ensure that dislodged sea lice are not released with discharge water near the farm site (e.g., by using screens on outflow ports to capture dislodged sea lice from discharge water). Allow for a minimum of 7 days between applications. Do not apply more than 6 applications of Interox Paramove 50 per year. The optimum treatment to remove infestations of sea lice is an immersion in a solution of Interox Paramove 50 at a concentration of 1500 ppm of hydrogen peroxide for a period of 20 minutes at temperatures up to 13°C (55°F). Interox Paramove 50 treatments may be extended for up to 30 minutes if desired. Shorten treatment time if water temperature is higher than 13°C (55°F). Additional guidance is provided in the table below:

NOTES:

■ Temperatures greater than 13°C and/or exposures longer than 20 minutes may result in damage or mortality of treated fish. Use extreme caution when applying at higher temperatures. Discontinue treatment and flush with sea water immediately if signs of distress in fish are observed;

■ Efficacy of treatment may be reduced when using concentrations below 1500 ppm.

The fish to be treated must either be crowded into a small area of the production net and completely encircled with a tarpaulin or transferred into a wellboat confinement area. Fish must not be crowded to the point where scale loss occurs. Water temperature and dissolved oxygen levels will dictate the stock

density in the treatment area. Supplemental oxygen must be supplied during crowding and treatment. The volume of water entrapped must be calculated (surface area of treatment area times the depth of the enclosed pen/well minus the fish biomass = cubic metre) then the estimated quantity of INTEROX PARAMOVE 50 required to achieve the target concentration indicated above should be added using a dedicated dosing system, such as a pump with venture and hoses/pumps for the enclosed tarpaulin method and a batch controller for the wellboat method. Representative water samples from the treatment area must be taken at regular times during the treatment period and tested to determine the concentration of hydrogen peroxide. The first sample should be taken at least 5-8 minutes after the start of the addition of Interox Paramove 50 to the fish pen and then taken at regular intervals thereafter (e.g., 15, 20, 30 minutes) to ensure that the concentration of hydrogen peroxide is maintained for the entire duration of the treatment. The requirement to add more Interox Paramove 50 or shorten the treatment period is based on these analytical results. Concentrations can be reduced by pumping fresh sea water into the treatment enclosure.

Water Temperature	Below 8°C	8 - 10 °C	10 - 14 °C	Greater than 14 °C
Hydrogen Peroxide Concentration (ppm or mg/L)	1700 - 1800	1550 - 1700	1400 - 1550	1200 – 1400
Amount of Interox Paramove 50 in Sea Water (g / L)	3.4-3.6	3.1-3.4	2.8-3.1	2.4 – 2.8

BEST USE RECOMMENDATIONS

Please note that INTEROX PARAMOVE 50 contains hydrogen peroxide. Product performance should be closely monitored following treatment. In addition, any sea lice population may contain individuals naturally less susceptible to INTEROX PARAMOVE 50 and hydrogen peroxide. These individuals may dominate the sea lice population if hydrogen peroxide is used repeatedly in the same site. Other mechanisms leading to decreased susceptibility, such as enhanced metabolism, may also exist.

Appropriate management strategies should be followed:

- Where possible, rotate the use of Interox Paramove 50 or other hydrogen peroxide products with different groups that control the same pests in a site.
- Use of this product should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for product performance.
- Contact an aquaculture specialist for any additional IPM recommendations for the specific site and pest problems in your area.
- For further information or to report problems with product performance, contact Solvay Chemical Inc. at 800-916-3232

PRECAUTIONS FOR SALMON:

Hydrogen peroxide has a short term adverse effect on fish gills. This is aggravated when gills have been damaged or compromised pre-treatment. Treatments must not be carried out if; 1) there has been or is an algal or plankton bloom, or 2) there is high organic and/or metal loading in the water of the treatment pens. Treatments must not be considered if the Secchi disc reading is less than 4 metres. If there is any doubt, it is advisable to have histology studies carried out on samples of gill before treatment. Net changes, grading and other management procedures that stress fish must be avoided the week before

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treatment. Crowding of fish as per the treatment instructions may stress fish. Dissolved oxygen meters must be used to monitor oxygen levels at all times. Supplemental oxygen must be supplied to the pen during the crowding period, setting of the enclosed tarpaulin or introduction into the wells and during treatment. The oxygen supply may be ambient level. Greater care is required in monitoring dissolved oxygen levels and stress as water temperatures increase. Irrespective of concentration of Interlox Paramove 50 achieved, extended exposure times are toxic to fish. Treatment times must not be extended beyond 30 minutes from the achievement of the target concentration of Interlox Paramove 50 in the treatment pen/well. Discontinue treatment and flush with sea water immediately if signs of distress in fish are observed. Monitor treatments for signs of distress by fish. If necessary (e.g., concentration of hydrogen peroxide exceeds 1800 ppm), take immediate steps to flush treatment area with fresh sea water using appropriate physical agitation. A sample of water from the treatment area should be taken and analyzed for hydrogen peroxide concentration between 2 and 5 minutes after treatment is completed to ensure rapid removal of any residual hydrogen peroxide from the wells or enclosed tarpaulins. Target concentration of hydrogen peroxide in the treatment area at the end of the treatment is 0 ppm. NOTE: Use only systems/procedures that are capable of determining hydrogen peroxide concentrations in sea water.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. KEEP CHILDREN AWAY FROM PRODUCT, CONTAINERS AND APPLICATION EQUIPMENT. Interlox Paramove 50 is an oxidising agent and will cause severe burns to skin and eyes. Corrosive to eyes and skin. **DO NOT** get in eyes or on skin. May be harmful if absorbed through the skin. Fatal or poisonous if swallowed. May be fatal if inhaled. Avoid inhalation of fumes.

When using well boats, all workers/personnel involved in handling, storing, transferring, mixing, loading, applying the concentrate, clean-ups/repair and in activities immediately after application, must wear chemical resistant coveralls (Tyvek or PVC full chemical splash protective suit) over a long-sleeved shirt and long pants, chemical splash proof face shield, socks and chemical-resistant boots and gloves.

When applying to sea cages, all workers/personnel involved in handling, storing, transferring, mixing, loading, applying the concentrate, clean-ups/repair and in activities immediately after application, must wear chemical resistant coveralls (Tyvek or PVC full chemical splash protective suit) over a long-sleeved shirt and long pants, chemical splash proof face shield, socks, and chemical-resistant boots and gloves. Wash thoroughly with soap and water after handling product and before smoking or eating.

All clothing and equipment should be washed with copious amounts of clean water after use. Do not contaminate food, feed or water bodies by the storage or disposal of the product or by the cleaning of equipment. Ensure all connections are tight and free of leaks before using Interlox Paramove 50 dispersal systems. Contamination and/or spillage of Interlox Paramove 50 can cause violent chemical reactions and/or fire. Before use, all operators should have read and understood this label and the product Material Safety Data Sheet [MSDS]. Copious volumes of water should always be on hand in case of emergencies. Secure containers with non-flammable strapping. **DO NOT** use absorbent materials to absorb spillage. All containers should be kept closed and out of direct sunlight when not in use. It is recommended that entry to fish farm areas is restricted until all treatments are completed. It is also recommended that recreational activities in treated water near fish farm areas are not permitted until tidal flushing occurs.

Fire:

Extinguish with water only. If safe to do so, keep containers cool by spraying them with water if exposed to fire. Keep upwind.

FIRST AID

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If Swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS:

TOXIC to aquatic organisms. Apply only to net pens enclosed by a tarpaulin or in a wellboat. Product is designed for the treatment of fish; however, at levels greater than the treatment dose, the product could be harmful to fish and aquatic life.

STORAGE:

Store product in original container in a cool place away from food, feed or other pesticides. Protect from prolonged exposure to direct sunlight. Store away from incompatible or flammable materials. Do not store bulk product for extended periods. In case of leakage or spill, flush area with large amounts of clean water and flush to drain in accordance with federal /provincial requirements. DO NOT flush into systems containing oil, fuel or other flammable materials. DO NOT use absorbent materials to absorb spillage. A clean water supply should be readily available for dealing with spills and for supplying showers and/or eyebaths.

DISPOSAL:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the treatment site or tank.
2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.