



NATULAR™ DT

A REVOLUTIONARY PRODUCT TO CONTROL CONTAINER BREEDING MOSQUITO LARVAE

Naturally derived active ingredient

Unique mode of action

Novel class of chemistry for public health

Reduced Risk active ingredient

Formulated for sustainable solutions



A RESISTANCE-FIGHTING LARVICIDE THAT PROVIDES UNSURPASSED EFFICACY AND REVOLUTIONARY EASE OF USE – NATULAR™ DT

Natular™ DT is formulated* and manufactured with naturally derived ingredients. The active ingredient in Natular™ DT, spinosad, is derived from naturally occurring bacteria and is highly effective in the control of mosquito larvae. WHOPES approved, Natular™ DT is designed specifically for container water treatment in dengue control programs.

*Formulation patent applied for.

PRODUCT HIGHLIGHTS >>

- Naturally derived active ingredient to mosquito control, spinosad
- Novel class of chemistry for public health
- Unique mode of action to fight resistance
- A natural product that's highly effective
- Natular™ DT is approved by the Drinking Water Quality Working Group of the WHO for potable water.
- One tablet provides 60+ days of control
- Approved by WHOPES for container breeding mosquitoes
- Revolutionary transportation, storage, and usage features

Actual size

Revolutionary in size, formulation and performance

Natular™ DT is only 12mm in diameter and is formulated as a bi-layer tablet that provides a dual-release action

- » The first layer dissolves within 60 seconds, rapidly delivering an effective dose that will kill larvae within 24 hours
- » The second layer then slowly dissolves over time to provide 60 + days of extended control in a 200 liter container
- » Exact dose tablet eliminates the risks of over and under-dosing plus assuring cost effective performance





Traditional Sand Granule

» 500,000 treatments of temephos weighs 10,000 kg and fills a 20 foot shipping container

Natular DT

» The same number of treatments can be transported on a single pallet—and weigh just 800 kg!

Revolutionary impact on storage and transportation management

- » One small lightweight pouch contains 250 Natular™ DT tablets
- » One case contains 16 pouches (or 4,000 tablets)
- » One pallet of Natular™ DT replaces 10 pallets of traditional granular larvicide

Natular™ DT is packaged in a waterproof, vacuum-sealed pouch to preserve product integrity during shipping and storage. Each pouch is also resealable to help maintain any unused product.

A natural larvicide that is highly effective

Trial results with Natular DT speak for themselves. Detailed WHOPES evaluation data can be found at <http://www.who.int/whopes/recommendations/wgm/en/>.

Nicaragua*

Lugo et al (2007) carried out simulated field trials using 200 liter plastic liners in metal drums to test residual efficacy of Natular™ DT against third instar *Aedes aegypti* mosquito larvae. **100% control was recorded for 64 days.**

Penang, Malaysia**

Jaal et al (2007) carried out simulated field trials in earthen and plastic jars filled with 200 liters of water to test the residual efficacy of Natular™ DT against third instar *Aedes aegypti* mosquito

larvae. In earthen jars, Natular™ DT provided 100% control for up to 16 weeks. In plastic jars, Natular™ DT provided **100% control for 112 days** while removing and replenishing 100 liters of water from each container weekly.

Martinique, France**

Macrombe et al (2007) used 175 liter plastic containers to simulate a field trial to control third instar *Aedes aegypti* mosquito larvae using Natular™ tablets, which provided **greater than 90% control for more than 60 days.**

**Lugo, Emperatriz, Director of Epidemiology, National Entomology Lab, Ministry of Health, Nicaragua. "Final Technical Report of Treatment with DT", 2007. (publication in press)

**Report of the tenth WHOPES Working Group Meeting, WHO/HQ, Geneva, 11-14 December 2006.

<http://www.who.int/whopes/recommendations/wgm/en/>



NATULAR™ DT TECHNICAL SPECIFICATIONS >>

- Controls container breeding mosquitoes
e.g. *Ae. aegypti* and *Ae. albopictus*
- 7.5 % active ingredient per tablet
- 101 mg. ai
- Tablet weight: 1.4 grams
- Tablet dimensions: 12 mm (D) x 6mm (H)
- Ultra-low dose: 0.056 PPM
- Dosage rate 18 times less than temephos
- LD 50 > 5,000 mg./kg.

Want to learn more?

Call Clarke for information about availability and delivery at: 1-630-894-2000 or www.clarke.com

Clarke

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Clarke is a global environmental products and services company. Each year, Clarke helps make communities around the world more livable, safe and comfortable by pioneering, developing and delivering environmentally responsible disease prevention and habitat management solutions. In 2008, Clarke founded The Clarke Cares Foundation, a non-profit created to provide disease prevention support for communities with critical needs.

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