

Human Safety

The active ingredient, TENEBENAL™, has undergone comprehensive testing on mammals according to OECD guidelines.

Risk assessments conducted on various exposure scenarios indicate that the product is safe for children and infants when used according to the label instructions.

Environmental Safety

TENEBENAL™ is environmentally safe when used and disposed of according to the manufacturer's instructions and local regulations.

TENEBENAL™ is readily absorbed by soil particles and disperses effectively. Its formulation is designed to prevent leaching, ensuring it stays primarily within the topsoil, posing minimal risk of contaminating the water table. As a low vapor compound, TENEBENAL™ is non-volatile and does not compromise the quality of breathable air.

VECTRON™ T500 Product Profile

Active Ingredient	TENEBENAL™, ISO name broflanilide
Mode of Action	GABA-gated chloride channel allosteric modulators
Formulation Type	Wettable Powder
Concentration	50 %
Dose Rate	100 mg a.i. / m²
Packaging	50 g sachets
Target Vector	Anopheles spp.
WHO PQ Reference Number	P-03226
Storage condition	Keep out of children. Store in original sachet in a secured dry, cool and ventilated area, off the ground. Prevent cross contamination with other pesticides, fertilizers, food and feed.

For further information please contact



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VECTRON™ T500

VECTRON™ T500 is an innovative insecticide developed for Indoor Residual Spraying to support insecticide resistance management strategies

Key Features

- Insecticide with new Mode of Action
- Active Ingredient – TENEBENAL™
- Non-repellent, odourless formulation that does not stain walls
- Easy to handle and transport, 50g sachet (100 sachets per carton)
- Low mammalian acute toxicity

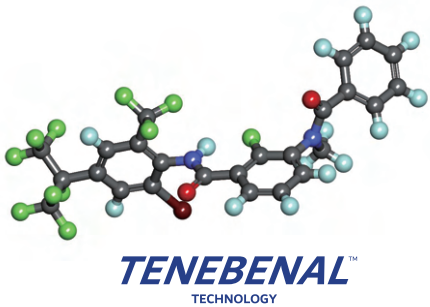
Innovation in Resistance Management



VECTRON™ T500 is a Wettable Powder insecticide to control Anopheles mosquitos.

It has demonstrated outstanding effectiveness in indoor residual spraying (IRS) against both susceptible and resistant strains, delivering strong residual efficacy on various wall surfaces for a duration of 9 to 12 months.

VECTRON™ T500 features TENEBENAL™ developed by Mitsui Chemicals Crop & Life Solutions, Inc., the world's first active ingredient classified in IRAC Group 30 (meta-diamide), which effectively targets pyrethroid-resistant mosquito populations. Unlike traditional insecticides adapted from agricultural use, TENEBENAL™ has not been employed in the management of crop pests or mosquitoes, minimizing the risk of resistance development. Its innovative mode of action makes it a significant addition to the vector control arsenal for IRS, and it can be utilized in rotation with other IRS insecticides as part of an Insecticide Resistance Management (IRM) strategy.



The Features:

Safe for Operators and Residents

This product has undergone extensive testing to ensure its safety for spray operators and households, including families with young children and toddlers. It complies with the strict safety standards established by OECD. Furthermore, feedback from both operators and residents has been favorable, with no adverse effects reported.



Spray campaigning in Ghana, 2024



Village Trial in Mozambique, 2024

Simple to Make, Simple to Use

Standard Personal Protective Equipment is sufficient; no specialized equipment is needed. It dissolves readily in water, simplifying the preparation process. For using Control Flow Valve (CFV), please follow the WHO guidelines and use one sachet for 7.5 liters. When not using CFV, use one sachet for 10 liters.

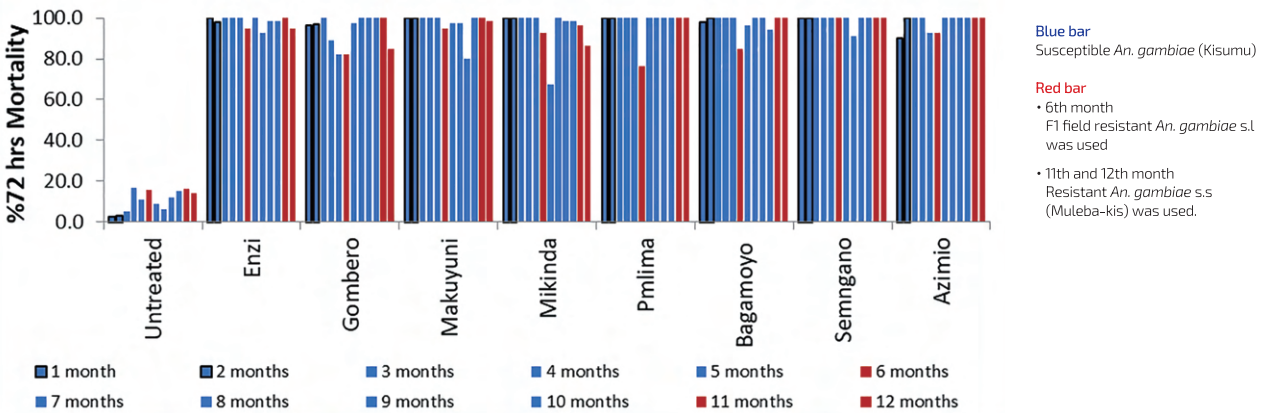
Odourless and Non-Staining

It has no smell and will not leave stains on the walls, allowing residents to enjoy their typical comfort. Moreover, TENEBENAL™ has low volatility, which extends its residual effectiveness. Unlike more volatile insecticides, it does not repel, allowing mosquitoes to stay on the wall longer, thereby enhancing its efficacy.

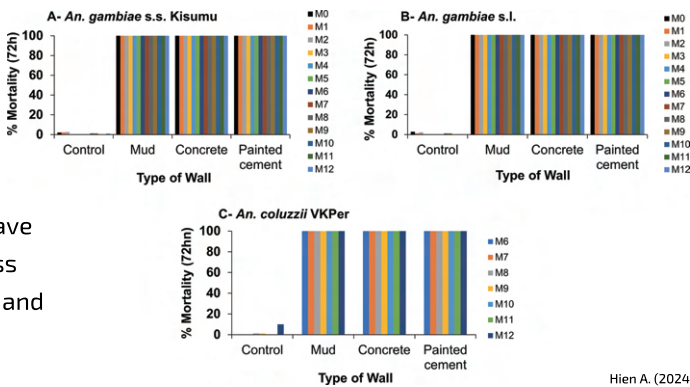


Long residual activity on Various Wall Surfaces within Diverse Communities

Tanzania Large-Scale Community Trial / Data evaluated for prequalification by the WHO. 72-hour mortality tested in 30 min WHO cone bioassays on walls of huts , study conducted 2021-2022



Burkina Faso Community Trial
Mortality tested in 30 min WHO cone bioassays on mud, concrete and painted cement walls, study conducted 2021-2022



Hien A. (2024)

Interviews with Sprayers and Residents

In Benin, a significant majority of those surveyed indicated that VECTRON™ T500 is very effective. Moreover, none of the households reported any health issues six months after the spray. Similar positive feedback was also noted from respondents in Burkina Faso, Malawi and Ghana.



Community Feedback in Malawi, 2022

More than ten years of teamwork and demonstrated effectiveness

This product has been developed with more than a decade of collaboration and support, with significant contributions and coordination from IVCC, a leading non-profit organization focused on at product development partnerships, along with numerous other partners. Comprehensive trials have taken place in several countries, showcasing its enduring residual efficacy and strong effectiveness against resistant malaria vectors (e.g., Ngufor 2023; doi: 10.1038/s41598-023-45047-w), in a range of environments and across different wall materials.