

PROFESSIONAL PEST MANAGEMENT

LONG-LASTING CONTROL OF PYRETHROID RESISTANCE

 **Actellic[®]300CS**
Long lasting residual insecticide

syngenta.

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SYNGENTA AND MALARIA

Syngenta's corporate goals include those dedicated to the improvement of health and quality of life.

We believe that people around the world deserve to live their lives uninterrupted by malaria.

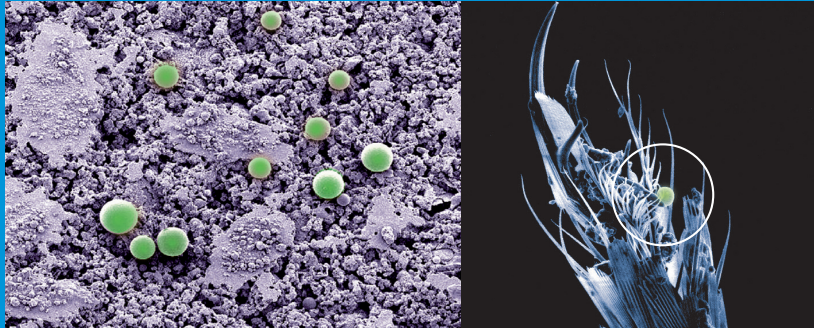
Therefore, we are investing in the advanced tools required to meet both today's and tomorrow's challenges in malaria mosquito control.

ACTELIC®300CS

Actellic®300CS is a new long-lasting microencapsulated formulation of the organophosphate insecticide pirimiphos-methyl.

Actellic 300CS has been specifically designed for use in indoor residual spraying (IRS) programs to provide up to one year's residual control of mosquitoes and other public health pests.

It is effective against pyrethroid resistant *Anopheles*, *Aedes* and *Culex* species.



Actellic 300CS capsules stay intact after application: Capsules on concrete

Mosquitoes pick up capsules from treated surfaces: Capsule on mosquito tarsae

Control of pyrethroid resistance

Insecticide resistance, particularly to pyrethroids, is a significant threat to the success of vector control programs and therefore malaria control and elimination targets.

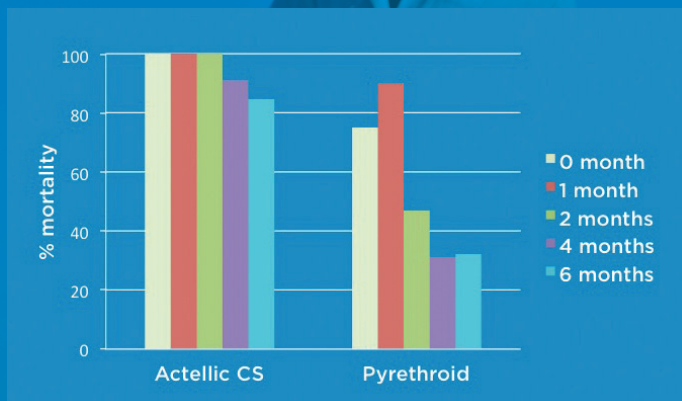
Actellic 300CS has demonstrated long-lasting residual control of pyrethroid resistant strains of mosquitoes in both the laboratory and in field hut trials.

Trial 1 and 2: London School of Hygiene and Tropical Medicine; Tanzania
Oxborough *et al* (2009) applied Actellic 300CS to cement plaques and demonstrated control of pyrethroid resistant *Culex quinquefasciatus* and *Anopheles arabiensis*.

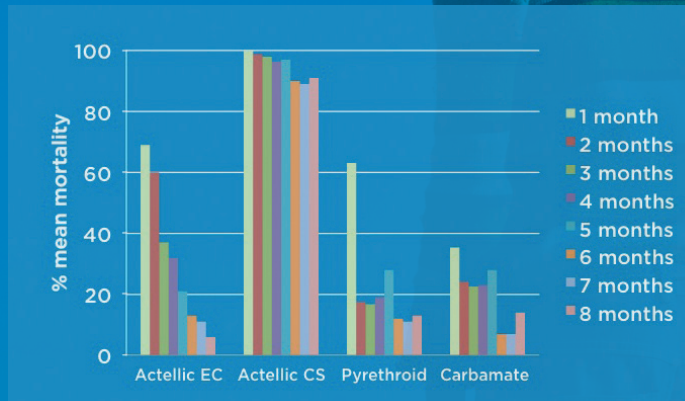
Trial 3: London School of Hygiene and Tropical Medicine; Benin
Hut trials by Rowland *et al* (2013) demonstrated Actellic 300CS controlled pyrethroid resistant populations of *Anopheles gambiae* for at least 8 months.

Trial 4: Swiss Tropical and Public Health Institute; Cote d'Ivoire
Hut trials in Mbe by Tchicaya *et al* (2013) demonstrated Actellic 300CS provided >70% control of free-flying pyrethroid resistant *Anopheles gambiae* for 7 months.

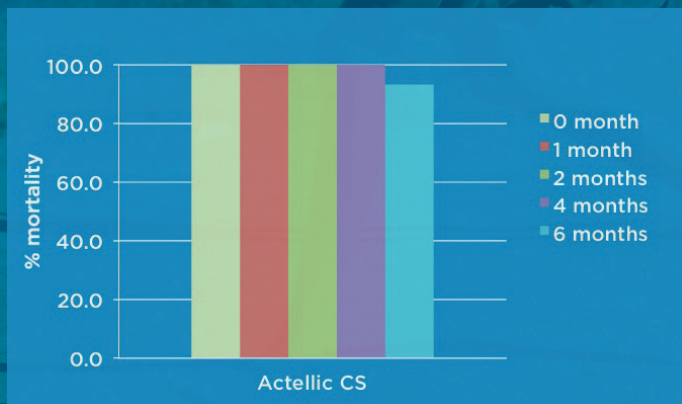
Trial 1. At least 6 months control of pyrethroid resistant *Culex quinquefasciatus*.



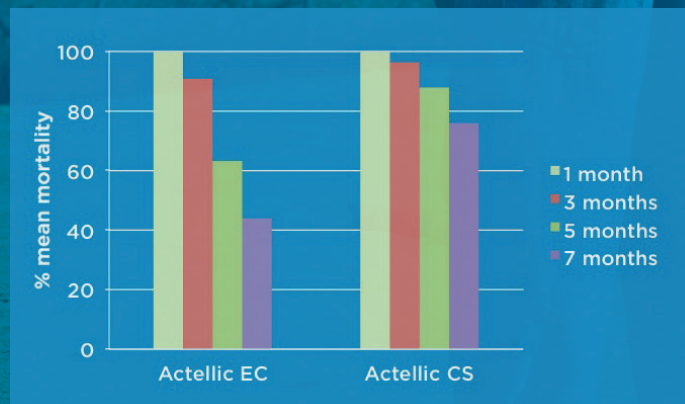
Trial 3. At least 8 months control of pyrethroid resistant *Anopheles gambiae*.



Trial 2. At least 6 months control of pyrethroid susceptible strain of *Anopheles arabiensis*.



Trial 4. At least 70% control of free-flying *Anopheles gambiae* for 7 months.



Safety profile

Actellic 300CS has an excellent human and environmental safety profile.

Actellic 300CS presents no significant risk to spray operators, householders or the environment when used as directed.

Actellic 300CS is WHO Class U: 'Unlikely to represent hazard in normal use'.

	Pirimiphos-methyl active ingredient	Actellic CS
Acute oral medial lethal dose, rat (mg/kg)	1414	>5000
Acute dermal medial lethal dose, rat (mg/kg)	>2000	>5000
Eye irritation, rabbit*	None	Minimal
Skin irritation, rabbit*	None	None

Resistance management

- ▶ Controls pyrethroid resistant strains of *Anopheles* and *Culex*
- ▶ Ideal rotation or mixture partner for Icon 10CS in IRS or pyrethroid LLITNs

Long-lasting IRS

- ▶ Up to one year's long-lasting performance across a wide range of surfaces
- ▶ Potential for only one application per season

User acceptance

- ▶ High levels of user acceptance demonstrated in field trials
- ▶ Controls a wide range of nuisance pests including mosquitoes, flies, cockroaches, and other crawling insects

FOR LIFE UNINTERRUPTED™



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