



Latest Update from WHOPES¹

New Recommendations at the conclusion of

**The tenth meeting of the WHOPES¹ Working Group
Geneva 11-14 December 2006**

The K-O TAB1-2-3

New recommended insecticide treatment for washed polyester nets

The K-O TAB 1-2-3 is a “dip-it-yourself” kit for treatment of washed polyester mosquito nets. The target dose (25 mg/m² AI) is similar to a K-O TAB but includes a binder that resists repeated washing. K-O TAB, a water dispersible tablet (WT) formulation of deltamethrin, has previously been evaluated by WHOPES¹ and has been recommended for treatment of mosquito nets. The company has disclosed the nature of the binder to WHOPES¹, and this information will be treated as confidential. The company has certified that it will inform WHO of any change to the binder, as this may require the reassessment of the safety and efficacy of K-O TAB 1-2-3 and therefore WHO's recommendation on the product.

It is recommended:

- that time-limited interim recommendation is given to K-O TAB 1-2-3 for treatment of washed white and coloured polyester mosquito nets and requested WHOPES¹ to coordinate large-scale field studies (WHOPES¹ Phase III) to confirm its efficacy and wash resistance, as well as operational acceptability, as a requirement for development of full recommendations on its use;
- that efficacy and wash-resistance of K-O TAB 1-2-3 on different types of polyester and on other type of fabrics should be determined.

The WHO assessment of the compliance of the manufacturer's assessment of exposure to and risks of treatment, washing and sleeping under K-O TAB 1-2-3 treated nets, is in line with the WHO generic risk assessment model.

Several laboratory studies have demonstrated high efficacy after up to 20 washes, particularly for KD of *An. gambiae*.

There was some variability in the performance of nets in different laboratories, with mortality dropping significantly below the cut-off value of 80% in at least two of the laboratory studies. However, in all three laboratories studies, K-O TAB 1-2-3 met the WHOPES¹ requirement for KD (>95% after 20 washes). After washing, maximum bioavailability of K-O TAB 1-2-3 treated nets was reached in one day at room temperature. In the small-scale field study (experimental huts) in the United Republic of Tanzania, mortality and BFI of *An. funestus* were higher with K-O TAB 1-2-3 washed 14 and 20 times compared with the exhausted conventional treated net with KO TAB and were similar for *An. arabiensis*. However, overestimation of the efficacy of K-O TAB 1-2-3

cannot be excluded as the exhausted conventional treated net used as a reference was washed beyond the cut-off value rather than before.

In the WHOPES supervised study in Benin, the performance of K-O TAB 1-2-3 treated nets, washed 20 times, was not equal to or better than those conventionally treated with K-O TAB and washed just before exhaustion (two times). The mortality and BFI of *An. gambiae* in huts with K-O TAB 1-2-3 treated nets, washed 20 times, were 41.9% and 74.8%, compared with 72.0% and 59.9% in huts with nets conventionally treated with K-O TAB and washed two times.

Conclusions:

Considering safety, efficacy and wash-resistance of K-O TAB 1-2-3 in laboratory and small-scale field studies, the meeting concluded that:

- K-O TAB 1-2-3 is an innovative technology for treatment of washed, polyester mosquito nets in the field. Polyester mosquito nets treated with K-O TAB 1-2-3 can be washed normally up to 15 washes, after which they should be retreated;
- treatment of mosquito nets with K-O TAB 1-2-3 does not convert mosquito nets to "long-lasting insecticidal mosquito nets", as defined by WHOPES¹, which requires that a long lasting insecticidal mosquito net washed 20 times or more should perform equally to or better than a conventionally treated net washed until just before exhaustion.

[More details...](#)

Note: WHO recommendations on the use of pesticides in public health are valid ONLY if linked to WHO specifications for their quality control.

Sources:

Report of the tenth WHOPES Working Group meeting.

http://whqlibdoc.who.int/hq/2007/WHO_CDS_NTD_WHOPES_2007_1_eng.pdf

Bayer Vector Control website:

<http://www.bayervectorcontrol.co.za/>

¹ WHOPES refers to WHO Pesticide Evaluation Scheme.

<http://www.who.int/whopes/quality>.