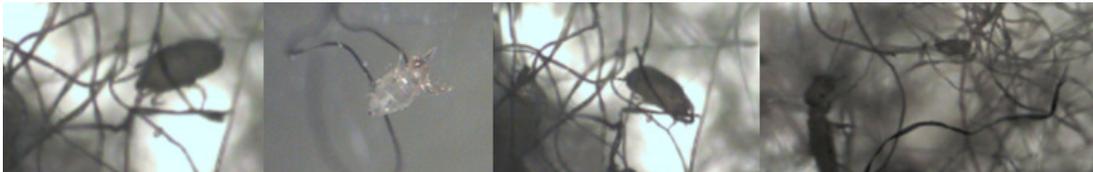


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### **KHI Products for Asthma & indoor allergies: DME-100-U**

K-HART International (KHI) produces series of preventive products for Asthma and other allergies such as Hay fever, runny nose, Eczema, watery eyes. The products are completely free from chemicals, children & Pet safe, and light weight. Some of the new products in the market by 2009 are **Universal Dust mite eliminator** which can be easily use with house hold vacuum cleaner, Dust mite eliminator travel mate-travel pack, Dust mite eliminator Room mate, and Dust mite eliminator pet brush. These products are well researched and proven for significant reduction of dust mite population which causes major allergies such as Asthma, eczema, and Hay fever. Dust mite eliminator travel mate is intended for indoor use.

As you know Asthma is triggered by dust mites' feces, dead mites, skin flakes, mould and contaminated moisture stagnated inside houses. Dust mites are microscopic creatures hardly seen by naked eye. The length of a dust mite is not exceeding 420  $\mu\text{m}$  and width from 250  $\mu\text{m}$  to 320  $\mu\text{m}$ . they are globular shape and having a translucent body with long hair on their striated cuticles. They have 8 hairy legs.



**Figure 1.**

### **Various microscopic insects live with us causing allergies.**

Dust mite do not bite or sting but harbor strong allergens in their bodies as well as in their secretions, excreta and shed skins. Constant contact with these allergens can trigger respiratory and dermatological complaints in some humans. Dust mites have a rudimentary alimentary system (no stomach) and require most digestion to occur outside their body. For this reason they secrete enzymes and deposit the fungus *aspergillus repens* on dust particles, to enable the fungus to pre-digest the organic matter with its enzymes. Dust mites eat the same particle several times, only partially digesting it each time.

We found that several thousands of dust mites live in pillows, mattresses, bed covers, surrounding & underneath of beds, and carpets. Some times the number exceeds to several millions. In addition to the dust mites above mentioned, there are few other

microscopic mites also live with them. They all carry translucent bodies. Figure 1 shows various mites that were found in bed sheets, mattresses, pillows, and carpets. Unfortunately they are not visible in naked eye to remove them. The dust mites move actively through thin fibers of dust particles. With a vacuum cleaner it is hard to remove all the dust mites as they are held to thin dust fibers and move against vacuum flow. In addition to thin fibers, there are dead mite bodies, dust mites' feces, dead human skin flakes, human hair, and other foreign matters are existed in dust. It was revealed that dust mites can not fly or move freely in the air without any lumps of dusts. Some times they can be found under the bed with foam of dust.

The products that we have designed are used to destabilize dust mites from their quick movements in dust fibers and also to affect their watery bodies in different directions so their body fluids do not function properly. As a result they either die or slow down their movements in dust. Our experimental investigation shows that most of the adult dust mites' movement limited to 5 minutes with DME-100-U product. It was observed that first 5 minutes, dust mites struggle to balance them-selves on the fibers of dust. That leads to quick removal of dust mites from carpets, pillows, bed sheets, mattresses by vacuuming them simultaneously. In laboratory tests, we have attempted to excite the destabilize mites by a thin rod, but it was revealed that the dust mites found dead.

Figure 2 shows the universal dust eliminator which can be easily fit to any house hold vacuum cleaner. DME-100-U is recommended to use in door environment. This product is recommended to every house hold to totally destabilize and eradicate dust mites. Then suck them by a vacuuming process. DME-100-U product is designed in such away that the product can be easily fitted to vacuum cleaner suction pad without any notice of it. Dust mite allergens are high in bed rooms of houses, hotels, Inns, motels and hospitals. DME-100-U dust mite eliminator help to completely remove dust mites forever. Product comes with multiple power choice; i.e.the product could be powered by mains or by AA batteries. It provides universal plug point to fit into any electric socket in the world.



**Figure 2.**  
**Dust mite eliminator universal-DME-100-U**