

New AATCC method on the assessment of the Anti-house dust mite properties of textiles

What is house dust mite?

The house dust mite is a tiny animal (up to 0.3mm) related to ticks and spiders and lives in house dust. The survival of dust mites depends on the cleanliness and the amount of moisture in the house. A necessary condition for growth (digestion and reproduction) is sufficient humidity.

Dust mites don't like extremes of temperature, direct sunlight or dry conditions.

Dust mites thrive in the environment provided by beds, kitchens and homes in general, where the sun's rays do not reach them. Mites remain in mattresses, carpets, furniture and bedding, since they can climb lower down through the fabric to avoid sun, vacuum cleaners, and other hazards, and climb higher up to the surface where humidity is high to get another skin cell to feed on. Even in dry climates, dust mites survive and reproduce easily in bedding, especially in pillows because of the humidity generated by the human body during breathing and perspiring.

All around the house dust contains all sorts of debris including Dust Mite feces and vacuuming alone does not remove all of this material from the air we breathe. With fitted carpets, vacuuming cannot reach the edges effectively for example. Inhaling these microscopic dust particles means inhaling dust mite droppings.

Mite-related allergies

House mite allergy is a hypertensive reaction to proteins in the excretion of dust mites. The protein attacks the respiratory passages causing hay fever and asthma. The excretion of mites contains a number of protein substances. When these are inhaled or touched by skin, the body will produce antibodies. These antibodies cause the release of a chemical that leads to swelling and irritation of the upper respiratory passages, which are typical asthma and hay fever symptoms. It is also thought that certain enzymes in the feces attack the cells of the lung leading to respiratory problems.

If a barrier between the sufferer and the dust mite can be established, then the feces cannot be inhaled and so the allergy sufferer gains relief. Certain mattress and pillow covers and similar household articles provide just such a barrier and provided they are regularly and properly cleaned, these have been shown to be very effective.

Where can house dust mites be found?

House dust mites are found in all homes.

- ⇒ Beds,
- ⇒ mattresses,
- ⇒ carpets,
- ⇒ furniture,
- ⇒ kitchens



Anti-house dust mite test on textile

The new standard effectively helps the consumer objectively compare the anti-dust mite properties of the product and thus promote customers' confidence towards the product and its brand. A newly developed method, AATCC 194-2006, is now established to perform the comparison of dust mites on textile. Its purpose is to evaluate the degree of anti-house dust mite activity in a long-term testing environment for textiles treated with anti-house dust mite agent.

The standard is applicable to all types of textiles such as mattresses, bedding, carpets, and the like.

Testing Methods	Description
Assessment of the Anti-House Dust Mite Properties of Textiles under Long-Term Test Conditions. (AATCC Test Method 194-2006)	Test and control specimens are inoculated with the specified dust mite and nutrients. After six weeks of incubation, the dust mites are recovered from the specimens by heat extraction. Results are expressed as percent reduction on the treated sample versus the untreated control.

Mites also infest soft toys and similar articles; washing these in hot water and/or tumble drying them on the hot setting will effectively devastate a dust mite community inhabiting such an article. Similarly, placing the item in a freezer overnight will kill dust mites, the item should be subsequently washed to remove the excretions that cause the allergic reactions.

If you are interested in the anti-house dust mite test, please contact us and we will kindly provide you with more information.

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