



County of Santa Clara Vector Control District

1580 Berger Drive

San Jose, CA 95112

Office: (408) 918 – 4770

www.sccvector.org

vectorinfo@cep.sccgov.org

FREQUENTLY ASKED QUESTIONS (FAQ) ABOUT MERUS® TREATMENT

Q. Why is it important to treat for adult mosquitoes?

A. Treatment targets and kills mosquitoes that are infected with West Nile virus (WNV) in the specific area they are found. Mosquitoes need a blood meal to live, and when they feed, they can transmit the virus to people.

Q. What are the symptoms of West Nile virus infection?

A. WNV infection does not cause symptoms in most people, but in some individuals, it can cause fever, headache, and body aches. In severe cases, it can cause significant neurological damage or death.

Q. Who is at most risk for serious complications?

A. Adults older than 50 years of age and individuals with certain chronic medical conditions such as diabetes, high blood pressure, cancer, and kidney disease are most at risk for serious complications.

Q. What time of year does the County of Santa Clara Vector Control District (District) start treatment operations?

A. West Nile virus activity is higher during May to September. The District schedules a targeted treatment when West Nile virus infected mosquitoes have been detected.

Q. How can I receive notification of scheduled treatments?

A. The District sends notifications and a map of the treatment location through Twitter, Facebook, SCCVector mobile application (available for iPhone and Android), Yahoo Groups, alertSCC, Nextdoor, and through the District website at SCCVector.org. Prior to treatment operation, households in the treatment zone will receive the District's advance notification doorhanger delivered directly to their door. In addition, treatment operations are always preceded by releases to the local news media.

Q. What type of insecticide is used by the District to treat adult mosquitoes?

A. The main material the District currently uses is Merus 2.0, an undiluted, botanical insecticide derived from chrysanthemum flowers. This product is approved by the Organic Materials Review Institute (OMRI) for use in organic production.



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Q. How does the District apply the products during a treatment?

A. The product is sprayed by a truck-mounted fogger that uses a very small amount of pesticide in a process called Ultra Low Volume (ULV) treatment. The mist of microscopic droplets is airborne and is not intended to leave significant residues. Flying mosquitoes are killed by contact with the treatment droplets. Mosquito treatment is done at night when most mosquitoes are flying, and human traffic is minimal.

Q. How will this insecticide affect my family and me?

A. At the low rates that the treatment products are applied (only 0.66 fluid ounces or about 1.32 tablespoons per acre), there should be no significant risk to you or your family. There is no need to relocate during the treatment. If you want to keep your family and pets away from treatment droplets, keep them inside during the timeframe the treatment takes place, and keep windows and doors closed.

Q. Will this product affect pets?

A. Merus does not affect pets. At ULV application rates, Merus has a significant margin of safety for mammals, birds, fish, and reptiles. In fact, the active ingredient in flea and tick control, pyrethrin, is used in much higher doses and applied on the skin of both dogs and cats. If you are concerned about direct treatment exposure to your pets, bring them indoors during the treatment. Any toys, water dishes, and other items that stay outside can be washed or wiped down before pets use them again.

Q. What if I am pregnant?

A. At ULV application rates, there are no special precautions needed for pregnant women. If you wish to minimize exposure, closing windows and turning off air circulation systems will suffice. Consult your physician if you have medical concerns.

Q. How do we know that treatment will not cause negative health effects?

A. Our [Science Research Page](#) provides peer-reviewed science literature on this and other related topics. If you feel ill after a treatment, you should see your physician.

Q. How does treatment reach my backyard?

A. Once the treatment is released from the unit, the microscopic droplets follow the air currents wherever they go. Some go over houses and others go around.



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Q. Will the ground treatment affect fruits and vegetables?

A. Normal washing of fruits and vegetables is recommended before consumption. Merus 2.0 is approved for use on organic production and quickly breaks down in sunlight.

Q. Will the ground treatment affect my lawn furniture, play equipment, toys, garden plants, swimming pool water, etc.?

A. The active ingredient, pyrethrin, degrades rapidly in the environment. It should not affect car paints or other painted surfaces. If you are still worried about residue on your food or children's play items, wash or wipe them down before use.

Q. Will this product affect bees?

A. Pyrethrin is toxic to bees when its directly applied to them, however, treatment is done late at night (usually starting around 11PM), when mosquitoes are active, and bees are not. Bees are inactive starting one hour after sunset to two hours before sunrise. Local field tests with Merus 2.0 showed bee survival after treatment ranging from 25 to 175 feet away. If you are worried about your hives, you can provide extra protection by covering the entrances with wet burlap during the treatment operation. The claims that problems with bee colonies are purely due to pesticide applications have not been supported. No single factor or pattern of factors have been proven to be the "cause" of the decline or of Colony Collapse Disorder (CCD). Parasites, pathogens, poor nutrition, drought, bee management practices, habitat fragmentation, and pesticides are thought to be potential factors.

Q. How low is ultra-low?

A. To picture the low volume dose of pyrethrins used during treatment operations, consider that the volume of Merus 2.0 liquid is roughly equivalent to spreading 1 1/3 tablespoons or 7 1/2 thimblefuls of liquid over a football field, and the amount of active ingredient (pyrethrins) applied amounts to a bout half a penny's weight per acre.

Q. Will the treatment cause reduced visibility when I am driving in the neighborhood?

A. No, the ULV treatment is very dilute and will not reduce visibility for driving or other activities.

Q. How long does treatment take?

A. Treatment operations begin at 11:00PM and are usually completed by 2:00AM the following morning.



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Q. How long does treatment stay in the area?

A. The treatment does not stay in any given area. Ideally, the treatment drifts through the neighborhood with air currents traveling above 1 mile per hour. It becomes more diluted as it travels down-wind.

Q. Do District staff need access to my property?

A. No, treatment is done using truck mounted units which travel slowly down the street.

Q. I didn't hear anything last night; does that mean the treatment was cancelled?

A. No, most of our treatment units are designed to be very quiet, so most people will probably not hear them as they pass down the street. If conditions like wind speed and temperature are out of range for a successful treatment event, the event will be postponed. If treatment operations are postponed, the District will notify residents through SCCVector.org, SCCVector app, Yahoo groups, and Twitter.

Q. Where can I get additional information regarding specific insecticides?

A. Questions concerning Merus 2.0 can be directed to the U.S. Environmental Protection Agency, by visiting www.epa.gov and typing "pyrethrin" or "Merus" in the search box. More information can also be found at the National Pesticide Center's website <http://npic.orst.edu> or by calling 1-800-858-7378.