Zika Virus
Prevention and Control

Tech Talk

This Tech Talk is based on the regulatory framework for disinfectants for non-critical surfaces in the United States, which may vary from requirements in other countries. Local regulations should always be consulted when evaluating disinfectant claims outside of the U.S.

What is Zika Virus?
Zika Virus is an enveloped, Group IV ((+)-ssRNA) virus of the family Flaviviridae. This family currently contains 67 identified human and animal viruses, including Yellow Fever, West Nile, and Dengue fever. Zika infection manifests symptoms in about 1 in 5 people infected. The most common of these are fever, rash, joint pain, or conjunctivitis (pink eye), but can include muscle pain and headache. A mild illness can result, usually lasting a few days to a week. However, for pregnant women there is a risk of serious complications to fetal development. Those who do not display symptoms can still transmit the disease. No vaccine is available and those infected should treat the symptoms with plenty of rest, fluids and acetaminophen for pain relief.


Can surfaces transmit Zika Virus?
It can be difficult to exactly quantify the risk of surface transmission for any infectious disease. The most current consensus is Zika Virus does not persist on surfaces for transmission, nor is it spread through water or air. Zika Virus is spread through mosquitoes of the Aedes species, direct sexual contact, or direct interaction with bodily fluids such as blood of a person who is actively incubating Zika Virus. Additionally, a mother may pass the virus through her placenta to her fetus. The best way to prevent the spread of Zika is to avoid transmission by mosquitoes or sexual contact by:

- Using a government registered insect repellent, such as 3M’s Ultrathon™
  http://solutions.3m.com/wps/portal/3M/en_US/Ultrathon/Products/
  These products are long lasting and have versions that can treat clothing for up to 6 weeks
- Covering exposed skin with long sleeved shirts and pants
- Reducing breeding grounds for mosquitoes by eliminating standing water
- Avoiding sexual contact if you or your partner have been diagnosed with Zika Virus


What surface disinfectants should be used for Zika Virus?
The U.S. Centers for Disease Control and Prevention (CDC) has not issued guidance on specific disinfectant products due to environmental contamination not appearing to play a role in infection spread.

There currently are no EPA registered disinfectants with specific label claims against the Zika Virus. Enveloped viruses similar to Zika are susceptible to a broad range of hospital disinfectants used to disinfect hard, non-porous surfaces. A list of 3M disinfectants that have claims for other enveloped viruses can be found on the last page of this Tech Talk.
**Disinfection for Zika Virus**

Use of hard surface broad spectrum disinfectants and hand hygiene as per normal operating procedures should be adhered to. In cases of blood or bodily fluid cleanup all PPE and appropriate containment procedures should be followed. After removal of the fluid the affected area can be disinfected with a broad spectrum disinfectant as per normal guidelines. Zika Virus is not known to persist on surfaces, however, being cautious and following these procedures may minimize any chance of inadvertent spread.

Until further guidance on how to use multiple-claim products is developed, professional judgment should be used when determining specific procedures for such multiple-claim disinfectant products. Likely it will be important to put resources toward good disinfection processes, which would include using at least the minimum concentration and contact time for one of the enveloped virus claims on a product.

**What is the latest news on Zika Virus?**

As of the week of February 22 2016 there have been reports of Zika Virus being found in saliva and other bodily fluids of a host. There is still no evidence that the virus can spread via saliva, contact such as kissing, or airborne vectors from a host. 3M will update this section as new information becomes available.

**What are enveloped and non-enveloped viruses?**

Viruses can be classified in a number of ways and one is the presence or absence of an outer envelope. In enveloped viruses, the interior is surrounded by a lipid bilayer studded with an outer layer of virus enveloped glycoproteins. In general, enveloped viruses are more susceptible to disinfectants than non-enveloped viruses. Zika is an enveloped virus. Examples of enveloped viruses include Human Coronavirus, Hepatitis C, HIV-1, and many others.

**What 3M disinfectants are of the type recommended by the CDC for Zika Virus?**

The CDC does not currently have a Zika Virus listing. All 3M disinfectant cleaners are EPA Registered, intended for hospital-use on hard non-porous surfaces, and have at least one enveloped virus claim. A complete list of those products can be found on the next page. Technical Data Sheets for 3M disinfectant products, which list their specific claims and other EPA label information, are available using the contact information below.

www.3M.com/facility/healthcare

Commercial Solutions Division
St. Paul, MN 55144-1000
1-800-852-9722

**References**


Disinfection for Zika Virus

3M Disinfectants with enveloped virus claims

<table>
<thead>
<tr>
<th>Product Name</th>
<th>EPA Registration Number</th>
<th>Enveloped Virus Claims</th>
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<tbody>
<tr>
<td>3M™ Quat Disinfectant Cleaner Concentrate 5L and 5H</td>
<td>6836-78-10350</td>
<td>Herpes Simplex type 1,2, Human Coronavirus, HIV-1</td>
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<tr>
<td>3M™ Neutral Quat Disinfectant Cleaner Concentrate 23L and 23H</td>
<td>47371-129-10350</td>
<td>Herpes Simplex type 1,2, Human Coronavirus, HIV-1</td>
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<td>3M™ HB Quat Disinfectant Cleaner Concentrate 25L, 25H, 25P</td>
<td>61178-5-10350</td>
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<td>3M™ HB Quat Disinfectant Cleaner Concentrate</td>
<td>61178-5-10350</td>
<td>Herpes Simplex type 1,2, Human Coronavirus, HIV-1</td>
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<tr>
<td>3M™ Disinfectant Cleaner RCT Concentrate 40L</td>
<td>6836-349-10350</td>
<td>Herpes Simplex type 1,2, Human Coronavirus, HIV-1</td>
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<td>3M™ Disinfectant Cleaner RCT Concentrate</td>
<td>6836-349-10350</td>
<td>Herpes Simplex type 1,2, Human Coronavirus, HIV-1</td>
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<tr>
<td>3M™ TB Quat Disinfectant Cleaner Ready-to-Use</td>
<td>1839-83-10350</td>
<td>Human Coronavirus, HIV-1</td>
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</table>

3M Branch Sales Offices

ANCHORAGE
11151 Caleska Circle
Anchorage, AK 99515
Telephone: 907/522-6200
Facsimile 907/522-1645

HONOLULU
4443 Malaai Street
Honolulu, HI 96818
Mail to: P.O. Box 30048
Honolulu, HI 96820
Telephone: 808-422-2721
Facsimile 808-422-9557

CONTINENTAL UNITED STATES
Customer Service Department
3M Center Building 223-SS-07
St. Paul, MN 55144-1000
Order Entry 1-800-852-9722
Facsimile 1-800-447-0408

CANADA
1840 Oxford Street East
London, Ontario, Canada N5V 3G2
Mail to: P.O. Box 5757
London, Ontario, Canada N6A 4T1
Telephone: 800-364-3577
Facsimile: 800-479-4453

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