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## Personal Mosquito Repellents Available in South Dakota — 2004

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The most commonly available insect repellents contain either DEET or permethrin. This publication provides information on specific repellents that are registered for sale in South Dakota in Spring 2004.

Personal mosquito repellents are products that can be applied directly onto the human skin or clothing for the purpose of repelling or killing adult mosquitoes.

While repellents containing the chemical DEET can be applied directly on human skin and clothing, products containing the insecticide permethrin cannot.

Permethrin must be applied only on clothing or related apparels such as hats, shoes, and overalls several hours before being worn.

Organic alternatives to DEET or permethrin are also available for chemically-sensitive individuals.

There appears to be a limit in the duration of protection time that increasing DEET concentrations may provide. For example, a product containing 100% DEET may provide no more than 10 hours of protection from mosquito bites. The duration of protection time provided by products containing 35% and 100% DEET may not be significantly different.

The use of insect repellents containing DEET is the best way to reduce the risk of getting West Nile Virus. Products containing

DEET are the most effective mosquito repellents available. The maximum concentration currently recommended for infants (greater than two months of age) and children is 30%. The concentration of DEET in products may range from less than 10% to over 30%. Higher concentrations of DEET will protect children for longer periods of time. Select the lowest concentration effective for the amount of time spent outdoors. It is generally recommended that DEET not be applied more than once a day. For most children going outdoors, the once-per-day application of DEET will be most appropriate at dusk, one of the two times per day mosquitoes are most active, the other time being dawn.

The U.S. military uses a product containing **33.3% DEET** in extended release formulation and always in combination with **permethrin-treated clothing**. This DEET and permethrin combination is expected to provide at least **8 hours** of protection under severe mosquito biting pressures in the field.

**See South Dakota Extension Fact Sheet 920, Personal Mosquito Repellents**, for detailed information about South Dakota mosquitoes, DEET, permethrin, and alternative repellents.

Ask for FS 920 at your county Extension office or download it from the Internet at <http://agbiopubs.sdstate.edu/articles/FS920.pdf>

**Table 1. Mosquito repellents containing 4.75% to 10% DEET.**

| <b>% DEET</b> | <b>Brand Name of Repellent</b>                                 | <b>% DEET</b> | <b>Brand Name of Repellent</b>                                      |
|---------------|--|---------------|---|
| 4.75          | OFF! Skintastic Family Formula Insect Repellent                | 7             | Insect Repellent Gel  |
| 4.75          | OFF! Skintastic Family Formula Insect Repellent Tropical Fresh | 7             | Misty Insect Repellent Spray  |
| 4.75          | OFF! Skintastic for Kids Insect Repellent Unscented            | 7             | OFF! Insect Repellent III Unscented                                 |
| 6.65          | Cutter All Family Insect Repellent                             | 7             | OFF! Skintastic Insect Repellent II Unscented                       |
| 6.65          | Cutter Insect Repellent Pleasant Protection                    | 7             | Repel 7% DEET   |
| 6.65          | Cutter just for Kids Insect Repellent 1                        | 7             | Repel Gel 7 IPF Insect Block  |
| 6.65          | Cutter Skinsations Insect Repellent                            | 7.125         | OFF! Skintastic II Insect Repellent Unscented                       |
| 6.65          | Cutter Skinsations Insect Repellent 1                          | 7.125         | OFF! Skintastic Magicolor Disappearing Purple Insect Repellent      |
| 6.65          | KRID Skeeter Soft Spray Insect Repellent 1                     | 7.5           | OFF! Skintastic Insect Repellent for Children                       |
| 6.65          | OFF! Skintastic Insect Repellent IV with Aloe Vera Unscented   | 7.5           | OFF! Skintastic Insect Repellent Fresh Scent                        |
| 6.65          | OFF! Skintastic IV Summer Splash                               | 9.5           | Coppertone Bug & Sun Sunscreen with Insect Repellent Kids Formula   |
| 6.65          | Walgreens Insect Repellent with Aloe Vera                      | 9.5           | OFF! Skintastic Insect Repellent with Sunscreen                     |
| 6.79          | Cutter All Family Insect Repellent Towelettes                  | 10            | Coppertone Bug & Sun Sunscreen w/Insect Repellent Adult Formula     |
| 6.79          | Cutter Outdoorsman Insect Repellent Towelettes                 | 10            | Cutter Insect Repellent Unscented                                   |
| 6.79          | Cutter Skinsations Insect Repellent 3                          | 10            | Cutter Insect Repellent with Sun-Screen SPF 15                      |
| 7             | Allstar Blitz Sta-Off Insect Repellent                         | 10            | KGRO Home Insect Repellent  |
| 7             | Cutter All Family Insect Repellent 2                           | 10            | Muskol (The Original) Insect Repellent w/Waterproof Sunblock SPF 15 |
| 7             | Cutter Insect Repellent  | 10            | Repel 10% DEET  |
| 7             | Cutter Insect Repellent Pleasant Protection 1                  | 10            | Repel Camp Lotion for Families                                      |
| 7             | Cutter Skinsations Insect Repellent 2                          | 10            | Repel Insect Repellent Camp Lotion for Kids                         |
| 7             | Cutter Skinsations Insect Repellent with Sunscreen SPF 15      | 10            | Solarsect   |

**Table 2. Mosquito repellents containing 12.33% to 20% DEET.**

| <b>% DEET</b> | <b>Brand Name of Repellent</b>              | <b>% DEET</b> | <b>Brand Name of Repellent</b>                                |
|---------------|---|---------------|---|
| 12.33         | BugSwipe Insect Repellent Towelette         | 17.5          | Family Formula Repel Insect Block 18% Deet                    |
| 12.33         | Can't Bite Me Swipes with Aloe              | 17.5          | Repel Pump Spray 18 IPF Insect Block                          |
| 12.33         | Total Solutions Insect Repellent Towelettes | 17.5          | Sawyer Deet Plus Composite Insect Repellent Lotion            |
| 14.25         | Chase-MM Insect Repellent Formula 2         | 17.5          | Sawyer Deet Plus Composite Insect Repellent Spray Pump        |
| 14.25         | Off! Insect Repellent II Fresh Scent        | 17.5          | Sportsmen Formula Repel Insect Block 18% Deet                 |
| 14.25         | OFF! Insect Repellent II Unscented          | 19            | Deep Woods Off! for Sportsmen Insect Repellent with Sunscreen |
| 14.38         | Deflect Insect Repellent                    | 19            | Deep Woods Off! Insect Repellent with Sunscreen               |
| 14.38         | Super Swat                                  | 19            | OFF! Deep Woods Insect Repellent with Sunscreen               |
| 15            | Amway D-15 Insect Repellent                 | 20            | Ben's 20 Backyard Formula                                     |
| 15            | BugOut Insect Repellent                     | 20            | Repel 20% DEET 15 SPF   |
| 15            | BugOut Mosquito Repellent                   | 20            | Repel Lotion 20 IPF Insect Block                              |
| 15            | BugOut Tick & Chigger Repellent             | 20            | Repel Lotion 20 IPF Insect Block 15 SPF Sun Block             |
| 15            | OFF! Insect Repellent Spring Fresh Scent    | 20            | Repel Sun & Bug Stuff   |
| 15            | Zep Insect Repellent                        | 20            | Sawyer Controlled Release Deet Formula                        |
| 16.6          | Ceratex AF                                  | 20            | Sportsmen Formula Repel Insect Block 20% Deet                 |
| 16.6          | Sawyer Broad Spectrum Insect Repellent      |               |   |

**Table 3. Mosquito repellents containing 21.85% to 29% DEET.**

| <b>% DEET</b> | <b>Brand Name of Repellent</b>                         | <b>% DEET</b> | <b>Brand Name of Repellent</b>                              |
|---------------|--|---------------|---|
| 21.85         | Cutter Backwoods Insect Repellent Pump Spray Unscented | 23.8          | Deep Woods Off! for Sportsmen Insect Repellent VII          |
| 21.85         | Cutter Outdoorsman Insect Repellent II Unscented       | 23.8          | Deep Woods Off! Insect Repellent V Unscented                |
| 21.85         | Family Formula Repel Scented Insect Block 23% Deet     | 23.8          | OFF! Deep Woods Insect Repellent V                          |
| 21.85         | Insect Repellent                                       | 25            | Ben's Backyard Formula Tick & Insect Repellent              |
| 21.85         | Super Swat II  | 25            | Ben's Backyard Formula Tick & Insect Repellent Eco-Spray    |
| 23            | Cutter Backwoods Insect Repellent Unscented            | 25            | Ben's Insect Repellent                                      |
| 23            | Sav-On Osco by Albertsons Unscented Insect Repellent   | 25            | Muskol Insect Repellent Spray                               |
| 23            | Walgreens Insect Repellent Unscented                   | 25            | PowerDeet 25 Insect Repellent for Outdoor Professionals     |
| 23.75         | Amway HourGuard Insect Repellent Spray 8               | 25            | The Original Muskol Insect Repellent Aerosol                |
| 23.75         | Can't Bite Me  | 25            | Ultrathon Spray Insect Repellent                            |
| 23.75         | Champion SprayOn Insect Repellent                      | 28.5          | Deep Woods Off! for Sportsmen Insect Repellent IV Unscented |
| 23.75         | Osco Insect Repellent                                  | 28.5          | Deep Woods Off! Insect Repellent VI Unscented               |
| 23.75         | S00856 Insect Repellent II                             | 28.76         | Ben's Wilderness Formula Tick & Insect Repellent            |
| 23.75         | Scent Shield No Stinkin Bugs                           | 28.76         | CRC Double Strength Insect Repellent                        |
| 23.75         | Ultrathon Insect Repellent 8                           | 29            | Repel Personal Insect Repellent                             |
| 23.75         | Watkins Insect Repellent                               | 29            | Sportsmen Formula Repel Insect Block 29% Deet               |

**Table 4. Mosquito repellents containing 30% to 100% DEET.**

| <b>% DEET</b> | <b>Brand Name of Repellent</b>                          | <b>% DEET</b> | <b>Brand Name of Repellent</b>                            |
|---------------|---|---------------|---|
| 30            | Army Type insect Repellent                              | 55            | BugX Insect Repellent Towelette                           |
| 30            | Ben's 30 Wilderness Formula                             | 55            | Repel Deerhunters Insect Repellent                        |
| 30            | Cutter Outdoorsman Insect Repellent Lotion              | 82            | North Insect Repellent Towelette                          |
| 30            | Cutter Outdoorsman Insect Repellent Stick               | 95.5          | Sawyer Maxi-Deet Insect Repellent Spray Pump              |
| 30            | Cutter Outdoorsman Insect Repellent Unscented           | 95.5          | Sawyer Maxi-Deet Professional Insect Repellent Spray Pump |
| 30            | Deep Woods Off! for Sportsmen Insect Repellent II       | 100           | Deep Woods Off! for sportsmen Insect Repellent I          |
| 30            | Deep Woods Off! Insect Repellent II Outdoor Fresh Scent | 100           | Deep Woods Off! Insect Repellent For Maximum Protection   |
| 30            | Muskol Insect Repellent Lotion                          | 100           | Maximum Strength Muskol Insect Repellent                  |
| 30            | Muskol Insect Repellent Pump Spray                      | 100           | Maximum Strength Muskol Insect Repellent Lotion           |
| 33.33         | Insect/Arthropod Repellent Lotion                       | 100           | New Muskol Insect Repellent Pump Spray                    |
| 33.33         | Ultrathon (TM) Insect Repellent                         | 100           | OFF! Insect Repellent for Maximum Protection              |
| 38            | Classic Formula Repel Insect Block 40% Deet             | 100           | Pic X-100 Deet  |
| 38            | Muskol Ultra Insect Repellent Spray                     | 100           | Repel 100 Insect Repellent                                |
| 38            | Ultra Muskol Insect Repellent                           | 100           | The 10-Hour Insect Repellent                              |
| 40            | Deep Woods Off! for Sportsmen Insect Repellent V        |               |   |

**Table 5. Mosquito repellents containing 0.5% permethrin**

| Brand Name of Repellent                                  | Brand Name of Repellent                  |
|--|--|
| Coulston's Original Duranon Tick Repellent               | Repel Permanone Permethrin Trigger Spray |
| Cutter Outdoorsman Gear Guard Insect Repellent Unscented | Repel Permanone Unscented                |
| Fite Bite Permethrin Clothing Spray                      | Sawyer Clothing Tick Repellent           |
| Repel Permanone  | Scent Shield No Stinkin Ticks            |
| Repel Permanone Clothing and Gear Insect Repellent       |  |

**Table 6. Mosquito repellents containing natural ingredients only.**

| Brand Name of Repellent                | Ingredient(s)                          |
|--|--|
| Bite Blocker for Kids                  | soybean oil, geranium oil, coconut oil |
| Repel Lemon Eucalyptus                 | oil of lemon eucalyptus                |
| Fite Bite Plant-Based Insect Repellent | oil of lemon eucalyptus                |

*This publication is intended for use by the citizens of South Dakota.  
Listing of brand names is for informational purposes only and does not imply endorsement  
of one product over another or discrimination against a similar unmentioned product.*

*Information is current as of March 2004.*

**Always read and follow product label directions and precautions.**

**In case of accidental poisoning call: 1-800-222-1222 (Sioux Valley Poison Control Center).**

**This publication and others can be accessed electronically from the SDSU College of Agriculture & Biological Sciences publications page at <http://agbiopubs.sdstate.edu/articles/ExE8147.pdf>**



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